

ELECTRONIC PURCHASING AND PAYMENT IN THE FEDERAL GOVERNMENT

Annual Report to Congress

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EXECUTIVE SUMMARY

This report, *Electronic Purchasing and Payment in the Federal Government*, discusses the activities the Federal government is undertaking to strengthen and integrate buying and paying processes through the use of electronic commerce (EC). This report is required by section 30 of the Office of Federal Procurement Policy Act.

The government's EC strategic plan, *Electronic Commerce for Buyers and Sellers* was issued by the President's Management Council's Electronic Processes Initiatives Committee in March 1998. The plan calls for aggressive government action to explore opportunities for applying commercial EC technologies and business practices to improve Federal buying and paying operations. The goal is that by 2001 Federal agencies will support their programs by making available customer-friendly electronic purchasing tools that can accommodate and are integrated with end-to-end commercial electronic processing of payment, accounting and performance reporting information.

In furtherance of this overall vision, the strategic plan provides a general framework for developing a business case for a wide variety of EC applications and sets forth policy principles for making and successfully managing investments in EC. It also identifies a series of activities to help shape agency planning. These activities are grouped in tracks which correspond to the pursuit of the following goals: (1) manage the transition from paper-based to electronic processes by fostering partnerships with affected stakeholders within government and with industry; (2) reengineer and integrate buying with end-to-end ordering and payment processing for low dollar, high volume buying activities in the nearer term; and (3) reengineer additional buying and paying functions as promising technologies emerge.

Agency reports submitted to the Office of Management and Budget indicate that activities are progressing along each of these tracks. Of particular note:

- ❑ To focus their activities and address the needs of stakeholders, agencies have developed cross-functional plans to implement the government-wide EC strategic plan.
- ❑ To facilitate low dollar, high volume purchasing, agencies have issued task orders with purchase card providers under the General Services Administration's Smart Pay contract. The Smart Pay contract offers agencies the opportunity to take advantage of new "smart card" technologies to enable substantial reengineering of agency payment operations. The efficiency of high volume purchasing is likely to improve even more as increasing numbers of purchases are made through catalogs that accommodate electronic payment through the use of the commercial card system.
- ❑ To further enhance access to open market contracting opportunities -- a key reengineering initiative -- pilot efforts have been undertaken to demonstrate that synopses, solicitations, and related documents can be made available electronically through a single government-wide point of entry.

Looking to the future, the report emphasizes continued piloting and interagency assessment. Major buying and paying pilots underway include those to:

- ❑ explore ways to enhance the functionality of electronic catalogs;
- ❑ look at ways to reengineer agency business operations to take full advantage of new smart card technologies;
- ❑ test approaches for achieving authenticated and secure electronic transactions; and
- ❑ assess options for providing electronic access to information concerning government contracting opportunities.

The government will be challenged to keep involved with the development of EC in the commercial world and to manage the reengineering of government business operations to take advantage of that development. Agencies will need to continue to be mindful to avoid the pitfalls of seeking to apply EC technology without first addressing the need to restructure their business processes and assessing the benefits to be attained by making the investment. In acquiring EC solutions, agencies will need to employ acquisition strategies that ensure sellers have a full understanding of the problems and needs to be addressed. Also, effective interagency cooperation will be necessary to leverage the government's EC investments.

The government recognizes the potential EC has to enable agencies to achieve significant process simplification, increase efficiency, and implement more effective buying strategies. The efforts underway offer the promise to yield substantial improvement in the support buying and paying provides for agency missions.

1. INTRODUCTION

Section 30(e) of the Office of Federal Procurement Policy Act requires the submission of an annual report to Congress discussing agency electronic commerce (EC) activity in procurement. This report, *Electronic Purchasing and Payment in the Federal Government*, discusses the activities the Federal government is undertaking to strengthen and integrate buying and paying processes through the use of EC. The information contained in this document is based on activities described in agency reports on Federal purchasing and payment that were provided to the Office of Management and Budget (OMB) in response to OMB Memorandum 99-02. (See Appendix A.)

This report focuses primarily on the progress that has been made to date and next steps in implementing the Federal government-wide strategic plan for EC, *Electronic Commerce for Buyers and Sellers*.¹ The strategic plan was issued by the President's Management Council's Electronic Processes Initiatives Committee (EPIC) in March 1998 to help agencies achieve greater return for their ongoing and future EC activities related to buying and paying. Among other things, the plan provides a framework for making effective business cases for a wide variety of promising commercial EC applications.

The strategic plan looks for agencies to pursue three tracks of activities. First, it calls upon agencies to manage the transition from paper-based to electronic processes by fostering partnerships with affected stakeholders within government and with industry to address needs and seek out common approaches for process improvements. Second, the plan directs agencies to reengineer and integrate buying for high-volume purchases with end-to-end ordering and payment processing through the use of purchase cards and electronic catalogs. It notes that the high-volume activity associated with micro-purchases and orders under \$25,000 from IDIQ contracts or schedules makes this transaction segment of the government market ready for rapid roll-out. Third, it calls upon agencies to reengineer other key functions within the buying and paying cycle as promising technologies emerge, even where "end-to-end" use of commercial EC services is not possible or is otherwise impractical.

The government-wide EC strategic plan calls for Federal activity to proceed along three related tracks: (1) fostering partnerships; (2) integrating high volume activities; and (3) reengineering key buying and paying functions.

Steps have been taken in each of these three tracks.

¹ See <http://policyworks.gov/epic>.

Highlights of Accomplishments

Track 1: Fostering Partnerships

To improve management and facilitate broader stakeholder involvement:

- Agencies have developed cross-functional plans to implement the government-wide EC strategic plan.
- The Procurement Executives Council (PEC) has established an EC Committee to: (a) focus additional attention on procurement-related EC matters, (b) ensure ongoing collaboration with the financial and information technology communities, and (c) develop a framework for working with industry.

Track 2: Re-engineering and Integrating High Volume Activities End-to-End

To minimize, and soon eliminate, paper from the processing of small dollar, high volume transactions:

- The General Services Administration (GSA) has awarded the “Smart Pay” smart card contract so that agencies may both continue reaping the savings and flexibilities generated by purchase card usage in small buys and be positioned to adopt emerging card technologies as agency processes are reengineered to take advantage of them.
- Agencies have been working with industry to explore opportunities for improving the functionality of electronic catalogs so buyers can, among other things, conduct market research more efficiently and sellers can enhance their ability to market their goods and services to buyers.
- A variety of efforts are being undertaken to foster secure electronic interactions, including use of smart cards and public key infrastructure.

Track 3: Re-engineering Additional Buying and Paying Functions

To strengthen other key functions of the buying and paying functions:

- Pilot efforts have been undertaken to further improve access to open market contracting opportunities and streamline or eliminate steps for publicizing synopses and issuing solicitations and related acquisition documents. These efforts have purposely been designed to be modular to allow agencies to realize early benefits and assess promise before significant resources are expended.
- Agencies are starting to turn to integrated electronic acquisition systems to reduce and eventually eliminate inefficient and administratively burdensome paper processes.
- Efforts have been undertaken towards the development of interface standards to allow purchase card information to be integrated into agencies’ financial management systems.

The next section of this report describes government-wide accomplishments in greater detail along with next steps.² A table summarizing current activity and next steps is set forth at the conclusion of the report. These activities are designed, in primary part, to ensure that agencies continue to follow industry's lead and consider reengineering processes if and when promising applications can facilitate policy principles identified in the strategic plan.

² Agency-by-agency information on EC activities, set forth in summary fashion, appears at Appendix B. Selected transactional information from procuring agencies is provided at Appendix C.

2. GOVERNMENT-WIDE ACCOMPLISHMENTS AND NEXT STEPS

Track 1: Fostering Partnerships

The potential of EC to help the government achieve process simplification, increase efficiency, and implement more effective buying strategies remains significant. This potential can only be realized, however, if efforts within government to implement EC are undertaken in a collaborative manner that addresses the needs of the acquisition, finance, and information technology communities. Equally important, agencies must keep abreast of commercial activities and manage the reengineering of government business operations to take advantage of developments in the commercial world.

The first track of activities focuses on facilitating open communications across functional lines within government. It also emphasizes management structures that aim to promote investments for those segments of the marketplace that, based on the volume, dollar size, and nature of the transactional activity, can be supported by technological solutions, services, and practices offered in the marketplace. The goal is to enable agencies to take advantage of new and better technologies as they become available and continually benefit from market-driven economies and innovations.

Change Management

Achievement of the long-term benefits of EC requires, first and foremost, that the transition from paper based to electronic buying and paying processes be managed effectively. A variety of efforts are being undertaken towards that end. Guidance has been issued to provide a framework that enables agencies to take greater advantage of the efficiencies and other benefits of EC. In addition, interagency organizations are helping to identify and lead the pursuit of common opportunities. Moreover, internal management structures are working towards ensuring that planning, investment, and implementation efforts are coordinated and effectively accommodate the needs of procurement, financial, information technology and program offices throughout the agency. Finally, efforts are being geared towards uses of EC that promote easy, efficient interactions between buyers and sellers to create an electronic business environment conducive to buyer and seller participation.

A. Reshaping the Regulatory Framework for EC in Acquisition

Accomplishment: The Federal Acquisition Regulation (FAR) has been revised to facilitate more efficient use of EC.

Section 850 of the FY 1998 Defense Authorization Act amended the Office of Federal Procurement Policy Act (OFPP Act) to expand agencies' opportunity to use EC to enable improvement in the acquisition process. Among other things, it eliminated complicated and bureaucratic certification processes that effectively constrained agencies from applying resources towards the full range of EC applications that can improve or enable process reengineering.

Last fall, an interim rule was published in the FAR to implement section 850.³ Like the law, the FAR rule promotes use of EC to improve acquisition processes whenever practicable or cost-effective.

For example, when soliciting competition in the local trade area for small dollar purchases in amounts between \$2,500 and \$25,000, the FAR envisions that contracting officers will select the method of execution (e.g., oral solicitation or electronic solicitation) that is more efficient.⁴ Some agencies find that oral solicitations through telephonic communications are more efficient than soliciting through EC alternatives currently available to them. Under such circumstances, the FAR anticipates that oral solicitations would be used. Other agencies are beginning to find that web-based software can be used effectively in some situations to create electronic bidders lists and provide directed notification to a limited number of sellers in the local trade area in a manner that is as efficient, if not more efficient, than oral solicitations. Where this is the case, the FAR anticipates that EC applications would be used to facilitate efficiency in the solicitation process.

Similarly, when soliciting competition on a widespread basis for small dollar purchases, the FAR envisions agency consideration of the Federal Acquisition Computer Network (FACNET) in those instances where use of such system would be efficient and cost-effective in carrying out the transaction in comparison to other available alternatives.⁵

As a result of these changes to the FAR, the regulatory framework is helping to promote migration of agency resources to those applications of EC that offer the greatest promise of process improvement.

Next Step: Designate a single, government-wide point of entry in the FAR for accessing procurement opportunities above \$25,000.

One particularly important pending FAR change involves designation by the OFPP Administrator of a single government-wide point of entry to allow the private sector to electronically access procurement opportunities above \$25,000 that would otherwise be published in the paper version of the *Commerce Business Daily* (CBD). This designation, in combination with legislative clarifications being sought by the Administration to recognize electronic notice through the single point of entry as an alternative to hard-copy publication, will ensure that: (1) vendors have easy and convenient access to government business opportunities electronically and (2) agency buyers can take advantage of the efficiency offered by providing notice electronically. For additional information on this issue, see the discussion on improving access to business opportunities under the Contract Formation and Administration building block.

³ See 63 Fed. Reg. 58590 (October 30, 1998)

⁴ See, for example, FAR 13.106-1(c)(ii)

⁵ For transactional information on the usage of FACNET, see Table 3 of Appendix C.

B. Improving Interagency Management Structures

Accomplishment: Cross-functional interagency groups are helping agencies to identify areas of common interest and leverage the government's EC investments.

The Electronic Processes Initiatives Committee (EPIC), the architects of the government's EC strategic plan, *Electronic Commerce for Buyers and Sellers*, plays a key role in facilitating organized government-wide action on activities to strengthen and integrate buying and paying processes through EC. Operating under the auspices of the President's Management Council, EPIC's principals meet periodically to assess progress and collaborate on next steps for key initiatives with cross-functional interest. EPIC seeks to shape activities to take advantage of technological solutions, services, and practices available in the commercial marketplace. It also gives significant attention to areas of significant transactional activity where the return from EC is likely to be the greatest. Consistent with principles in the strategic plan, EPIC promotes piloting and interagency assessment. This allows agencies sufficient time to assess a project's promise before investing significant resources. It also favors investments that are modular in nature, interoperable, and replaceable without substantial investment loss.

EPIC's support group meets on a monthly basis to enable agencies to share experiences and develop strategies for taking effective advantage of card services in reengineering agency payment operations, undertaking secure electronic transactions, enhancing use of electronic catalogs and malls, and other electronic initiatives. The EPIC support group ensures ongoing coordination of EC development activity across the Federal finance, acquisition, and information technology communities by including representatives of the Chief Financial Officers Council (CFO Council), the Procurement Executives Council (PEC) and the Chief Information Officers Council (CIO Council) in its discussions. Representatives of these organizations provide insight into the needs and priorities of the stakeholders within their respective communities.

To bring better focus to the activities of stakeholders within the procurement community in particular, the PEC (formerly the Federal Procurement Council) established a standing committee on EC, similar to the EC Committee of the CFO Council, which addresses common issues related to financial aspects of EC. The PEC EC Committee supports its Council's goal to promote effective use of EC to enhance the government's ability to support mission accomplishment.

While the Committee's focus is limited to procurement-related EC, its charter specifically calls for its members to work closely with the CIO Council and the CFO Council -- a recognition that many EC initiatives of interest to the procurement community also affect other stakeholders. To ensure effective-cross functional cooperation, the Committee intends to work with the other stakeholders, EPIC, and the President's Management Council to identify champions to lead resolution of issues of importance to the procurement community.

Procurement Executives Council EC Committee

Mission: To maximize efficiency and effectiveness in Federal acquisition systems through electronic means to improve business processes.

Initial Projects:

- **Improve Electronic Access to Business Opportunities --** The committee will support or participate in an evaluation of the Electronic Posting System (EPS) that has been piloted by several agencies and make recommendations on appropriateness of taking the system government-wide.
- **Develop Metrics –** The committee will identify metrics for EC including program value and information collection methods.
- **Follow developments of EC in the commercial world --** The committee will establish a framework for developing a working relationship with industry for fostering EC and undertake liaison activities with other EC-involved groups public or private.
- **Identify, on an ongoing basis, new opportunities for reengineering business processes. –** The committee will seek ways to explore and exploit potential benefits of emerging technologies for Federal procurement processes.

Other interagency bodies are helping to launch focused pilot efforts to explore promising opportunities and enable agencies to capitalize on areas of common interest. For example:

- ❑ *The Interagency Acquisition Internet Council (IAIC)* seeks to promote ways to optimize the use of the Internet in streamlining the Federal acquisition process and increasing communication of Federal acquisition-related information. IAIC has been instrumental in helping to exploit emerging technologies to improve use, access, and dissemination of procurement related information over the Internet. Its members have been at the forefront in testing an Internet-based electronic posting system to enhance seller access to Federal business opportunities and related information and, in the process, reduce burden on buyers in providing such information.
- ❑ *The Federal Public Key Infrastructure Steering Committee* helps to foster public confidence that electronic business processes may be used securely. Created by the Government Information Technology Services (GITS) Board, the Committee coordinates Federal activities to develop and promote a public key infrastructure (PKI). PKI is designed to be used to authenticate users and data, protect the integrity of transmitted data, and ensure the non-repudiation and confidentiality of data for interactions on open networks such as the Internet. The Steering Committee promotes use of commercially available technology and products, encourages industry to build products which are interoperable, making sure that Federal programs can take advantage of later marketplace

changes and improvements. Equally important, the Committee seeks to demonstrate aspects of the evolving PKI through pilot programs and projects.

The Federal Electronic Commerce Program Office (ECPO) provides ongoing support and assistance to carry out the various government-wide EC activities. Housed in the Office of Government-wide Policy at the General Services Administration (GSA) and co-chaired by representatives from GSA and DoD, ECPO helps to support, coordinate, and monitor the government's implementation of EC. It undertakes a variety of activities to facilitate development and use of promising EC solutions identified in the strategic plan. Among other things, it manages pilot efforts, such as the catalog interoperability pilot where agencies and industry are working together to identify and promote enhancements to the functionality of electronic catalogs. ECPO also provides a forum (i.e., the EC Coordinators Group) for operational representatives of the procurement, finance, and technology communities to share accomplishments and discuss common challenges in their implementation of EC and arranges EC best practices conferences to highlight key agency EC initiatives. ECPO also supports efforts to gather transactional data regarding the level of EC usage.

Next Step: Continue to assess the role of interagency bodies and their effectiveness in meeting cross-functional needs.

Agencies generally indicated that interagency groups were helpful for identifying and initiating pursuit of activities of common interest.⁶ Agencies report benefit from the cross-fertilization that results from interagency efforts. This can be especially important for agencies with smaller procurement budgets. The Department of Education, for example, intends to rely primarily upon interagency solutions rather than undertake major initiatives of its own. To this extent, they depend upon organized and well managed interagency activities to demonstrate promising EC applications which they can then adopt to take advantage of the efficiencies that EC offers. Additional review of the relationship between existing bodies will be undertaken by EPIC in consultation with the PEC, the CFO Council, and the CIO Council to help ensure that common and cross-functional needs are being addressed and duplicative efforts are minimized.

⁶ See Appendix B for a breakdown of individual agency participation on the interagency organizations discussed in this section.

C. Strengthening Internal Management Structures

Accomplishment: Management structures within agencies are also helping to ensure that EC efforts are undertaken in a coordinated, strategic, and cost-effective manner.

While interagency cooperation remains a necessary component for the government's ability to leverage its EC investments, agencies recognize that successful application of EC to improve their buying and paying processes ultimately depends upon effective internal management structures. Pursuant to guidance issued by the Office of Management and Budget (OMB), agencies have developed cross-functional plans to implement the government-wide EC strategic plan. These plans are being used by agency management to focus their EC investments.⁷

While individual management structures vary, agencies are taking steps to ensure that their internal bodies promote uniform implementation to the extent practicable, consistent with section 30(c)(1) of the OFPP Act. In this regard, structures are designed to ensure EC applications satisfy cross-functional needs and concerns. In some cases, this is accomplished through boards with agency chief information officer and chief financial officer representation to review investments in information systems projects, or steering committees or task forces. In evaluating proposals for new investment, these structures also help to ensure that due consideration is given to existing infrastructures as appropriate, as envisioned by section 30(c)(2) of the OFPP Act. Further, in undertaking acquisitions, OMB's *Capital Programming Guide*⁸ reminds agencies to use effective market research, sound acquisition planning, and strategies that facilitate due diligence by sellers to fully understand program needs and pitfalls to achieving them. In this way, agencies will better position themselves to elicit realistic, high value solutions from the marketplace and to hold sellers accountable financially for achieving program results.

At GSA, for example, the Deputy Associate Administrator for Acquisition Policy chairs an EC Steering Committee made up of senior level representatives from each GSA service, the Office of the CIO, the Office of the CFO, and from various functional areas throughout the agency. The Committee provides oversight and guidance to the agency's EC Task Force, which assesses EC applications to ensure that they satisfy cross functional needs and are interoperable to the maximum extent practicable and ensure agency policies are consistent with GSA's intent to promote widespread use of EC. Similarly, the Department of the Treasury (Treasury) established a Procurement Electronic Commerce Team in 1998 to organize and promote the efforts of its 12 bureaus. A direct communication link was established between the procurement executive and the CIO and CFO to collaborate on procurement automation and EC issues.

Within the Department of Defense (DoD), the DoD CIO is responsible for the overall policy guidance and oversight for the Joint Electronic Commerce Program (JECp). The DoD

⁷ Agencies that have submitted implementation plans to OMB are identified in Appendix B.

⁸ The *Capital Programming Guide* is a supplement to Part 3 of OMB Circular A-11. See <http://www.whitehouse.gov/OMB/circulars/a11/cpgtoc.html>.

CIO serves as the Department's Principal Staff Assistant (PSA) responsible for JECP development, technical integration, and uniform implementation of approved DoD-wide electronic business (EB)/EC initiatives across all organizational and functional boundaries. The DoD CIO established an EC Office on the CIO staff which provides EB/EC focus on management and oversight of continued implementation planning and program development. This office also provides direction and oversight to the Joint EC Program Office (JECPO), which assists in execution and implementation of the JECP in support of the DoD PSAs and Components.

Responsibilities of the Joint Electronic Commerce Program Office (JECPO)

- Provide shared EC services to DoD.
- Champion and partner with the Services, Agencies, Principal Staff Assistants (PSAs), and DoD customers as they transition to EC strategies and techniques in their respective business practices.
- Leverage existing EC initiatives to promote efficiencies and interoperability throughout DoD to eliminate duplication of effort.
- Recommend appropriate technology for EC to the DoD Chief Information Officer (CIO) and assist with implementation throughout the Department.
- Provide architectural, technical, and operational support for issues that arise during the engineering or reengineering of EC processes.
- In coordination with the Services, Agencies, and appropriate PSAs, with oversight by the DoD CIO, represent DoD on EC matters with other Federal executive agencies and ensure implementation of DoD EC policies and agreements reached with international and Federal partners.
- Provide program oversight for all JECPO funded EC projects.
- Ensure consistent planning and implementation of EC based upon open standards for interoperability in a common business environment.
- Assist the Services and Agencies in their EC outreach in coordination with the ECRCs.

The DoD CIO established a DoD team, comprised of Office of the Secretary of Defense PSAs representatives and DoD Component EB/EC focal points to participate in the development and coordination of DoD Policy and planning documents for EB/EC. The DoD CIO Guidance and Policy Memorandum for Defense-wide EB/EC establishes direction for the Joint DoD EB/EC Program, establishes policy and assigns roles and responsibilities, and authorizes publication of DoD-wide strategic and implementation plans. DoD has issued an EB/EC strategic plan to set forth the Department's EB/EC vision, goals, objectives, and strategies. The plan is designed to establish the road map for a coordinated Defense-wide program.

Next Step: Share implementation plans and work towards the development of metrics.

The agencies' development of EC implementation plans places the government in a better position to take advantage of developments in the marketplace as they arise and processes are reengineered. Sharing of these plans will enable agencies, among other things, to identify more readily opportunities to build on promising investments and assess the effectiveness of their own approaches against those at other agencies.

Application of appropriate metrics will also help managers keep efforts on track. Some concern has been expressed that current reporting requirements for certain transactional data, as called for in section 30(e)(4) of the OFPP Act, may not serve as a sufficiently meaningful management tool until metrics are developed to measure whether the electronic applications applied to the transactions are effective. In addition, collection of this information remains a challenge, since data reporting systems currently in place are not presently structured to capture this information in an efficient and comprehensive manner.⁹ For these reasons, the PEC EC Committee is working to identify metrics and will consider potential improvements in current data collection methodologies over the longer term.

⁹ Transactional data that was collected for this report is set forth at Appendix C. Data is reported for: (1) use of purchase cards, (2) posting of business opportunities via CBDNet, and (3) activity on FACNET.

D. Undertaking Outreach

Accomplishment: Agencies continue to recognize that management efforts must be geared towards uses of EC that promote easy and efficient interactions between buyers and sellers.

Consistent with section 30(c)(3) of the OFPP Act, agencies are taking steps to assist small businesses (including small disadvantaged businesses and women owned small businesses) as they reengineer their processes to maintain their competitiveness in an electronic environment.

Efforts continue to increase the visibility of small businesses through the Procurement Marketing and Access Network (PRO-Net),¹⁰ a free-of-charge, Internet-based database of small business vendors managed by the Small Business Administration (SBA). PRO-Net operates as an electronic gateway of procurement information for and about small businesses. It is an authoritative source of information about small businesses seeking Federal prime and subcontracting opportunities. It includes an online search engine providing access to the profiles of more than 181,000 small businesses, including disadvantaged, 8(a) certified, historically underutilized business zone (HUBZone) certified and women-owned firms. PRO-Net is also used by contracting officers to identify eligible very small business (VSB) concerns.¹¹ Using PRO-Net, contracting officers can search for profiles of small firms in a variety of ways, including by standard industrial classification (SIC) code, Federal or quality certifications, key words, location, and business type. Some agencies, such as the Department of the Interior (DOI), use PRO-Net to generate “bidders lists.”

In the summer of 1998, OFPP and SBA initiated an innovative pilot to provide streamlining and facilitate access to competitive small businesses through PRO-Net. Under the pilot, interested agencies have been encouraged to consider issuance of class waivers from the synopsis requirements of the FAR when acquiring services between \$25,000 and \$100,000 from small businesses. Participating agencies in the pilot (of which there are now 14), have been asked and agreed to use PRO-Net to identify bids from small businesses.

Many agencies, in coordination with their Offices of Small Disadvantaged Business Utilization, also provide outreach through their home pages. Such assistance may include links to agency small business specialists, on-line handbooks describing how to sell effectively to the agency, and agency forecasts of upcoming needs.

Within DoD, Electronic Commerce Resource Centers remain dedicated to assisting the Services and Agencies in their outreach programs.

Next Step: Improve the Acquisition Reform Network (ARNet) and other vehicles that facilitate easy access to information and easy interactions between buyers and sellers.

¹⁰ See <http://pro-net.sba.gov/>.

¹¹ The VSB pilot program, authorized by section 304 of Public Law 103-403, is an extension of the small business set-aside program.

For several years, ARNet¹² has served as a central location on the Internet for both government and industry for quick access to a wide variety of information relating to government contracting. ARNet includes a reference library of government laws, regulations, policies, best practices and training packages. It also provides links to systems that provide information on Federal business opportunities. An interagency team including representatives from GSA, the Department of Transportation (DOT), the Department of Energy (DOE), the Department of Veterans Affairs (VA), and the National Aeronautics and Space Administration (NASA) is working to enhance the usefulness of ARNet as a resource as well as its user-friendliness.

Aside from ARNet, efforts will continue to evaluate how electronic tools focused on easing the transition for small businesses from paper-based to electronic processes, such as PRO-Net, might be further improved so that small business participation in Federal contracting remains strong.

¹² See <http://www.arnet.gov>.

Track 2: Re-engineering and Integrating High-Volume Activities End-to-End

In FY 1998, the government made approximately 28 million purchases. About 98 percent of these transactions are valued at \$25,000 or under. This volume of activity presents an initial target of opportunity for buyers and sellers, given the amount of efficiency that can be achieved by the application of EC technologies. It also represents a sufficiently large business opportunity to attract the interest of technology and financial service providers. For these reasons, the strategic plan identifies micro-purchases (i.e., purchases of \$2,500 or less) and orders under \$25,000 from indefinite delivery, indefinite quantity (IDIQ) contracts or schedules as a market segment poised for rapid EC roll-out.

The building blocks in this track emphasize, to a large extent, those EC mechanisms – namely electronic catalogs and purchase cards -- that facilitate high volume, generally lower dollar buying and paying activity.¹³ Fostering secure electronic interactions is a related goal inasmuch as a growing number of transactions is occurring through the Internet – an open network.

Electronic Catalogs

Expand and enhance electronic catalog purchasing, by increasing interoperability as feasible, linking to payment utilities, and migrating to commercial catalog solutions.

Limited resources and a decreasing acquisition workforce have caused agencies to turn increasingly to existing contract vehicles awarded by their own and other agencies to meet their needs. Multiple award schedule contracts and multiple award task and delivery order contracts have become popular vehicles, among other reasons, because they offer agencies the opportunity to effectively utilize market competition in an efficient manner in placing orders to meet a variety of needs without having to undertake the time and expense associated with awarding a new contract vehicle. The application of the Internet and the world wide web to these government contracts has resulted in the emergence of Federal "electronic catalogs" that buyers electronically browse to gain greater awareness of the products and services available under contract.

Once an agency has completed its market research and acquisition planning, conducted a source selection and selected a best value contractor, electronic catalogs can enable paper-free order placement. With increasing numbers of catalogs able to accept payment by government purchase cards, vendors can be paid more efficiently.

Recognizing the benefits of electronic catalogs, the government continues to strive for the type of "catalog interoperability" that can (1) further improve the visibility of existing contract vehicles to facilitate market research at the front end of the acquisition process, (2) aid agencies' best value selection process, and (3) enhance order placement, payment, accounting, and reporting.

¹³ Related payment efforts for other market segments are discussed in the building block on Electronic Payments.

A. Improving Access to and Use of Electronic Catalogs

Accomplishment: Agencies that have created electronic catalogs and malls are taking steps to improve visibility and make use easier for their own buyers and those at other agencies.

The managers of two of the government's most prominent electronic buying sites -- *GSA Advantage!* and the DoD E-Mall -- are taking steps to improve the functionality of their respective vehicles. GSA continues to make offerings under the Federal Supply Schedule program available through the laptops of agency buyers across government to search on product specific information, review delivery options, and place orders from schedule contractors. *GSA Advantage!* provides information on items in the GSA supply system and highlights the mandatory Federal Prison Industries (UNICOR) and Javits-Wagner-O'Day (JWOD) Act procurement list items, as well as environmentally-friendly and energy-savings products. So that buyers can take full advantage of their purchase cards for micro-purchases, GSA began to phase in a requirement in March 1998 for schedule contractors to accept the government purchase card as payment for acquisitions up to the micro-purchase threshold (i.e., \$2,500). As of January 1999, all GSA schedules include this requirement.

In FY 1998, total sales using *GSA Advantage!* were \$61 million. This represents an increase of 119 percent over FY 1997 sales volume. There are approximately 70,000 registered users of *GSA Advantage!* who use the system for comparative shopping (market research) and placing orders. GSA estimates that, on a daily basis, about 18,000 searches are performed on *GSA Advantage!* and 1,000 purchase orders are issued.

GSA seeks to capture a greater percentage of the more than four million products and services offered under its \$10 billion schedule program. GSA's Federal Supply Service (FSS) is undertaking steps, among other things, to ensure sufficient staff resources (under the Office of the FSS Chief Information Officer) are dedicated to managing ongoing technological challenges and to address vendor concerns that have delayed some vendors' willingness to sell through *GSA Advantage!*

GSA anticipates that sales through *GSA Advantage!* will continue to increase as new enhancements are unveiled. These enhancements will include:

- ❑ Reduced burden for schedule vendors providing data, such as drawing product information from vendors' web sites;
- ❑ Online interactive help, such as customer call-back and e-mail updates on the status of orders;
- ❑ A replication server to ensure around-the-clock availability of *GSA Advantage!*; and
- ❑ Improved interfaces to agency buying and paying systems.

The Defense Logistics Agency (DLA) E-Mall is being expanded into a DoD E-Mall to provide DoD and other government customers a single point of entry for one-stop Internet shopping across all DoD electronic catalogs. The enhanced visibility is further facilitating market

research by making it easier to locate, learn about and compare products under contract based on quality and price. "Corridors" are being constructed so that buyers can more rapidly identify similar types of products and vehicles that have been set up by their military service or defense agency.

The DoD E-Mall provides secure on-line ordering of more than two million items. These items represent a mix of DLA direct vendor and depot-managed national stock numbered items as well as a growing list of commercial catalogs. Additional features of the E-Mall include: on-line registration for government purchase card holders, information regarding product quantities or delivery timeframes, and on-line status of E-Mall orders. For buyer convenience, the E-Mall highlights products offered through the JWOD Program, environmentally-friendly products, and hazardous materials. In addition, a "training corridor" is being constructed to allow on-line search, registration, and payment of a wide variety of course offerings and conferences.

Next Step: Create a central index to further ease the identification of electronic catalogs suitable for interagency usage.

Agencies clearly recognize the value of providing easy and quick access to existing vehicles that potentially can satisfy their needs. Many homepages provide links to key electronic catalogs. For example, the Nuclear Regulatory Commission's Division of Contracts and Property Management internal internet homepage provides direct links to electronic catalogs such as *GSA Advantage!* and Federal Prison Industries' UNICOR On-line Shopping Catalog. Similarly, the State Department Procurement Executive Acquisition Web Site and Electronic Toolkit includes, among other things, links to government-wide acquisition contracts and multi-agency contracts and provides guidance for their use in conducting market research and placing orders online.

NASA's Consolidated Contract Initiative (CCI) represents perhaps the most extensive effort to date to heighten awareness and make use of existing vehicles. An Internet site lists existing NASA contracts and other government agency contracts that have a likelihood of meeting NASA's mission needs -- including *GSA Advantage!*, DOT's Information Technology Omnibus Procurement program and DOE's Energy Savings Performance Contract initiative. NASA procurement officers are required to satisfy their requirements through the use of existing or planned contracts before initiating new awards. A contract resource list permits users to identify possible contracts to meet their needs. Technical and procurement points of contact are provided for user follow-up. NASA's CCI database currently includes about 100 contracts available for use by NASA and other Federal agencies. Approximately 40 of these contracts are with small, disadvantaged, and women-owned businesses. CCI has enabled NASA to substantially increase the use of existing vehicles and save the costs to support duplicate contract efforts. The acquisition planning module of CCI allows buyers to aggregate requirements prior to solicitation to maximize procurement leverage.

Consolidated Contracting Initiative

NASA's Consolidated Contracting Initiative (CCI) enables NASA to make greater use of existing contracts to meet common needs. Key to the CCI is an Internet-based contract resource list that provides fast, accurate, and low cost information about shared contract opportunities. The CCI has substantially increased the use of existing contracts – lessening time spent on acquisition related tasks, minimizing contract duplication, reducing closeout backlogs and improving contract cooperation with other Federal agencies.

<http://ec.msfc.nasa.gov/msfc>

Given the increasing trend towards interagency acquisitions, IAIC will work with the EC Committee of the PEC and managers of vehicles with significant interagency activity to undertake more concerted efforts to assist agencies in identifying existing government-wide agency contracts and multi-agency contracts that potentially could be used to help satisfy their needs.

B. Piloting Opportunities for Catalog Interoperability

Accomplishment: Agencies have been working with industry to explore ways in which market research can be conducted more effectively across catalogs.

In FY 1998, ten agencies, including GSA, NASA, and DoD, working with CommerceNet, a non-profit industry consortium, undertook a pilot to create a search environment and demonstrate that Federal government buyers could search across multiple existing electronic catalogs for items available for order and obtain consistent result sets. The pilot included catalog ordering from *GSA Advantage!*, the NASA Scientific and Engineering Workstation Procurement (SEWP), and the DoD E-Mall (in a limited application). A commercial catalog was also used in the pilot. Currently, searching multiple catalogs involves accessing each catalog individually, performing a search on the items contained in the different catalogs, and manually comparing the answers. Agencies worked with vendors to standardize the content and structure of information concerning a select group of items in five different catalogs for several vendors and used eXtensible Markup Language (XML – a non-proprietary, Internet standard) to organize and tag the information. The pilot demonstrated the ability to successfully search across multiple seller databases based on one set of parameters and return all available options to the users. For buyers, the pilot results point to greater potential efficiency in conducting market research. For vendors, it could point the way to easier marketing of prospective customers without the need to present their wares in a unique way to each customer.¹⁴

Making the Web Work Smarter for EC

HTML: (Hypertext Markup Language) is the common standard for defining files for display on a web browser. The "markup symbols" in HTML specify how the information is to be displayed.

XML: (Extensible Markup Language) offers a way to tag information such that users can search across different web-based catalog locations and obtain consistent search results.

By specifying the structure of the information contained in an Internet site, XML facilitates electronic commerce by allowing buyers to search for and compare items in a consistent manner.

Next Step: Undertake further piloting to demonstrate real time ordering and payment with buyer and seller authentication and security among interoperable catalogs.

Although electronic searching of on-line catalogs can facilitate efficient market research, it remains an open question how much automation can be used to enhance the process for making the best value decision. In most instances, human intervention and business judgment will need to be applied in the best value process. However, once a source is selected and an order is ready to be placed, automation can again facilitate expeditious execution of the order and prompt payment. A follow-on pilot will aim to expand the universe of vendors to improve market research, taking advantage of ongoing voluntary efforts in industry to standardize product information and test on-

¹⁴ Some technology providers see a market for helping companies develop secure, transaction-ready, government-customer focused websites. Others are providing sites for government customers to search prices and specifications across multiple vendors.

line ordering and payment with both buyer and seller authentication using smart card generated digital signatures.

Electronic Payments

Increase and improve use of commercial financial transaction processing services for account management, invoice and remittance processing, and intra-governmental transfers.

Electronic mechanisms can improve the Federal government's payment processes by helping to ensure correct payments are made at the proper time to the appropriate parties. EC can help to make the payments process noticeably more accurate and reliable, reducing the numbers of late payments, erroneous payments, or payments with incorrect or inadequate documentation. It also can save the time and cost of excessive human intervention. In addition, a history of prompt and accurate payments can attract world-class vendors to transact business with the government, increasing the quality and variety of goods and services available to Federal agencies.

Preferred EC Payment Mechanisms by Type		
	Low Volume	High Volume
Low Value	Purchase Cards Debit Cards	Purchase Cards ACH
High Value	ACH FEDWIRE	Prime Vendor ACH

An increasing percentage of Federal payments to sellers are being made electronically. The fastest growth is taking place in low dollar, high volume payments where purchase cards are being used to reduce costs and increase efficiency in making vendor payments. Other EC payment mechanisms are enabling the government to make

process improvements where purchase cards may be inappropriate. These mechanisms include the Automated Clearing House system (ACH), used for a wide variety of electronic payments, and third party drafts, which allow a more easily integrated means for making low-value, non-recurring payments by check, but with an electronic "back end."

The Administration remains committed to maximizing the use of commercial payment utilities (i.e., commercial financial transaction processing services), where appropriate, to meet the government's payment needs. Commercial entities, such as banks, that specialize in financial transaction processing have developed effective systems for processing payments to virtually any entity anywhere in the world. In contrast to the government, these entities have both greater expertise and greater resources to concentrate on the development, maintenance, and upgrade of these systems. In addition, these entities have developed proven mechanisms to manage risk in a network environment. Credit card associations, for example, manage credit card risk by assigning risk between banks. Issuing banks (those that provide the card to the purchaser) are generally liable for losses resulting from imprudent cardholder behavior, intercepted cards, and other causes. Acquiring banks (those that represent the merchants) are generally liable for losses the merchant could have prevented. Such risk management structures are critical, especially in electronic transactions where jurisdictional authority may be unclear.

In some cases, however, appropriate commercial payment mechanisms are not readily available. In those cases when the government must develop its own payment systems, it should do so within the context of accepted best practices and technology standards. In those cases where there is a strong business case for "in-house" systems development, adherence to common processes and technology standards for architecture and operation will help to ensure that these government-developed systems are more viable over the long term.

A. Using Commercial Purchase Cards for an Increasing Percentage of Small Purchases

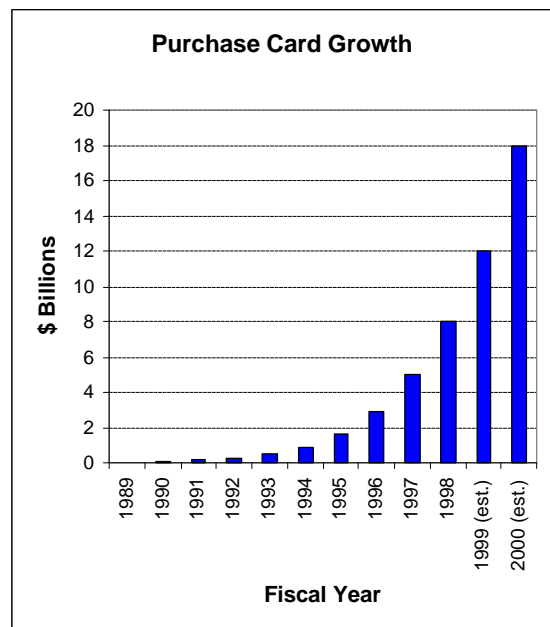
Accomplishment: Agencies are increasing their use of purchase cards to facilitate small dollar purchases and for a variety of value-added services.

The Administration's emphasis on using purchase cards to streamline purchasing and payment dates from 1993, when the National Performance Review, now known as the National Partnership for Re-inventing Government (NPR), recommended that agencies increase their use of purchase cards to improve the Federal procurement process. This movement to increased use of purchase cards was further encouraged by the Federal Acquisition Streamlining Act (FASA) and the related Executive Order 12931, which facilitated agencies' use of purchase cards for "micro-purchases" (i.e., purchases under \$2,500). The Debt Collection Improvement Act (DCIA) provided further impetus for card use to satisfy the requirement that payments to vendors be made electronically.

Commercial purchase cards constitute the foundation of much of the government's strategy for implementing electronic commerce because they combine easy application to both buying and paying with the potential for end-to-end electronic processing and significant administrative savings. In addition, they are extremely well suited to purchasing from electronic catalogs, a preferred electronic commerce application. Because purchase cards can be issued to program offices (i.e., end users) to conduct micro-purchases, this tool helps to alleviate the burden placed on contracting offices, allowing them to focus their reduced staff resources on more complex high-value procurements where their expertise adds the greatest value to the buying process.

In addition to the benefits that cards provide in administrative savings and by facilitating timely and accurate payments, they also provide refunds to the purchasing agencies. Just as an individual might obtain a rebate, frequent flyer miles, or other benefits based on his card transactions, the government has negotiated refunds in its card services contract. Refunds vary based on the specific terms of each agency's arrangement with its card-issuing bank and are dependent on the agency's payment history. For example, the Department of Veterans Affairs (VA) pays its charges daily, and receives a refund of approximately one percent of its transaction totals. In FY 1998, VA's card refunds totaled more than \$7 million. These refunds are allocated to the VA hospitals and other activities based on card transaction volume. The refunds can then be allocated by each activity to service delivery. For example, the VA's Knoxville Medical Center in Iowa was able to use its refunds to purchase equipment for its eye clinic.

In FY 1998, a number of agencies reported using purchase cards for 90 percent or more of their micro-purchases. These agencies include the Department of Health and Human Services (HHS), DOT, VA, and the Environmental Protection Agency (EPA). DoD reported its FY 1998 usage for micro-purchases at just over 85 percent. Other agencies are moving toward achieving this level of purchase card use. Total government-wide use of the purchase card in FY 1998 totaled nearly \$8 billion.¹⁵ This figure includes more than \$800 million in activity on VA's Prime Vendor payment program, an application based on the GSA SmartPay purchase card services (see below). Purchase card usage in the government is expected to increase to approximately \$12 billion in FY 1999 and about \$18 billion in FY 2000.



The Administration's vision for future card services programs is to build, through cooperative effort of Federal financial, information, procurement, and security communities, a multi-application platform based on an open, interoperable system architecture. This platform consists of core financial services (travel, fleet, and purchase card services), with the potential to expand to include other financial and administrative functions. To achieve the government's goals in this area, GSA awarded the SmartPay contract to enable agencies to begin migrating from single-purpose charge cards to integrated cards or, eventually, multi-functional smart cards, as appropriate. Under this multiple award task order contract, agencies selected services from among five banks. For core card services, the contract permitted agencies to choose: (1) separate cards from different providers (banks) for purchase, travel-related payment services, and fleet services, (2) separate cards but from a single provider to simplify business relationship, administration, and systems interfaces, or (3) integrated cards provided by one provider. Agencies were also given the opportunity to select value added services, including hybrid cards that combine the traditional magnetic stripe technology with computer chip technology, and a package of services to provide user authentication and secure electronic messaging. In addition to these benefits, better access to information, made possible through the new cards, should help provide greater insight into buying trends and the impact of card usage on, for example, small businesses. In November 1998, agencies began using cards issued pursuant to the GSA SmartPay contract.

Next Step: Ensure the successful transition to the new card providers so that agencies are effectively positioned to take full advantage of value added services as they reengineer their processes to accommodate such services.

¹⁵ For a breakdown by agency of purchase card usage in Calendar Year 1998, see Table 1 of Appendix C.

The GSA SmartPay contract provides an important vehicle for the government to greatly enhance the application of EC to small dollar buying. Inherent in the opportunities provided by this tool, however, are challenges in ensuring its effective implementation and the successful migration from legacy systems. GSA (with the support of the CFO Council and EPIC) has been working with agencies to address transitional problems associated with basic account set up, account maintenance, cardholder management, invoicing, and reporting functions. GSA holds weekly meetings with the SmartPay contractors to ensure that they understand the government's priorities in addressing challenges. In addition, GSA has secured the services of a contractor to provide technical support to ensure the successful implementation of the banks' Electronic Access Systems (EAS). These systems are used to establish accounts, maintain and query card account information, and produce reports through an electronic interface (usually web-based) to the bank's database of card information. User groups, comprised of agencies using the same GSA SmartPay contractor, have been established to facilitate information sharing and problem resolution. These efforts are helping contractors to better understand and address the government's needs. GSA, the CFO Council, EPIC, and the user groups will continue to work aggressively toward a complete and successful transition.

In addition to the core services of providing purchase, travel, and fleet cards, the GSA SmartPay contract includes a number of value-added options, available at each agency's request. These options include such services as the Prime Vendor arrangement (discussed in detail below), ATM access, stored value cards, hybrid cards that contain both a magnetic stripe and a computer chip, photo identification cards, smart cards for identity authentication, and other options. In the coming year, agencies will expand the use of these optional services.

The structure of the GSA SmartPay program and contract reflect, in large part, the government's desire to accelerate agency migration away from legacy systems. Lessons learned from the award and administration of GSA SmartPay will be used to help the government strengthen its ability to manage other EC efforts that, for strategic reasons, also involve application of a variety of leading edge technologies in addition to proven services.

B. Using Commercial Payment Mechanisms to Support Intra-governmental Transfers

Accomplishment: The options for commercial processing of intra-governmental transactions have been thoroughly investigated. The government has committed to an “off the shelf” approach.

In 1997, EPIC launched a new initiative, the Intra-Governmental Transfer System (IGOTS), to improve the processing of payment and collection transactions between Federal agencies. An interagency task force, chaired by OMB, was formed to conduct a needs assessment and provide recommendations on how these transactions should be effected in the future. This effort involved a systematic examination of the payment options available from private sector providers. Each possible option was assessed against a set of evaluation criteria that included such considerations as presence of operating rules, payment management functional requirements, audit and control requirements, cost and schedule factors. Based on this evaluation, the task force recommended the use of a slightly customized commercial purchase card model for most types of intra-governmental transfers.

In order to explore fully the possibility of implementing this recommended system, the Treasury’s Financial Management Service (FMS) led a team of procurement and financial experts in working across agencies and with representatives from the banking community. After a detailed examination of this issue, the government’s functional requirements, and the services available from the banking industry, including customized options, the Administration’s commitment to the adoption of standard commercial processes was further validated. The IGOTS team determined that the collection and maintenance of IGOTS accounting information would require significant changes to the standard credit card mechanisms, making the system difficult to implement and prohibitively expensive. EPIC has decided, therefore, to give preference to an unaltered commercial card mechanism to meet the need for these intra-governmental, small-value retail transactions.

Next Step: Work with the banking community to secure the most advantageous processing rates for intra-governmental transactions.

The intra-governmental transfers initiative has now moved into a new stage in which discussions have begun with the service providers (banks and card associations) to provide payment processing for retail buying and selling between government entities for the lowest possible fee. Many government merchants operate on very slim margins, and the customary processing fees (approximately 2% of the transaction amount) can be prohibitive, especially on larger-value transactions. Therefore, the government will work with the service providers to address the principal cost drivers, most notably “float” (the cost of funds during the “grace period”), and the refunds paid to buying agencies. Through a cooperative effort with the GSA SmartPay banks, we expect to find the most advantageous mechanism for our payment processing needs in this area.

C. Improving High Value Payments to Frequent Trading Partners

Accomplishment: VA's Prime Vendor program provides commercial payment processing to vendors in large value, ongoing business relationships.

While purchase cards are an extremely effective means of making high-volume, low-value purchases, other payment needs are less well satisfied by that mechanism. For example, where large value transactions and an ongoing relationship are involved, it may be more advantageous to negotiate alternative mechanisms that avoid the percentage-based charges imposed by the card associations on merchants. To address this need, agencies are pioneering new payment mechanisms in the Federal government.

Prime Vendor allows VA to seamlessly place orders, make payments, automatically update its accounting system, and advise buyers with status information, dramatically reducing processing time.

VA, for example, has developed an EC payment mechanism for its multi-billion dollar Prime Vendor procurement program. The Prime Vendor program is designed to provide VA Medical Centers an efficient way to place recurring orders for goods and supplies, typically in the pharmaceutical, subsistence, and medical/surgical areas. The Prime Vendor acts as a distributor, offering VA a variety of goods from numerous manufacturers, at low, negotiated contract prices. Since these transactions are typically high-value, vendors are reluctant to accept credit cards because the related fees would be significant. Moreover, this transaction cost would inevitably be passed on to the VA in the form of higher prices.

The payment mechanism in VA's Prime Vendor program is based on VA's successful Credit Card System (CCS). CCS allows VA to accept a daily transaction file for credit card transactions from its card-issuing bank, post those transactions to the department's integrated accounting system, and remit an electronic payment to the bank for all processed transactions. An enhancement to CCS has enabled VA to use this system to streamline Prime Vendor payments as well.

The Prime Vendor payment program utilizes a credit card-like account, established at the VA's SmartPay contract bank by the VA facility. Prime vendor orders, placed electronically by VA, are then processed against this account through an electronic interface between the Prime Vendor and VA's bank. Specific data elements are transmitted with this transaction, including a VA-generated purchase order number. The bank accepts these transactions each day and settles with the Prime Vendor daily for the full amount of each transaction.

Subsequent to settlement, the contract bank transmits a daily electronic file to VA containing the detail of all posted transactions, including VA-specific data elements. VA then remits to the contract bank a daily electronic payment. All transactions remitted to VA are automatically posted to VA's accounting system through CCS, providing daily updates to VA facilities. The bank also remits specific reports electronically to VA for distribution to participating facilities.

This payment program provides a number of substantial benefits to all participants. The Prime Vendor is assured of immediate payment by VA's bank and is charged a small, transaction-based fee. The bank gains the opportunity to process business not normally captured in its credit card market. VA quickly initiates a full electronic business cycle, dramatically reducing processing time. This payment mechanism also helps to keep the vendors' processing costs to a minimum, allowing greater savings to be passed on in lower prices. During FY 98, more than \$838 million in Prime Vendor payment transactions were successfully processed.

Next Step: VA will continue to expand its Prime Vendor program and other agencies will explore this mechanism for their own needs.

Once VA concludes the transition to its new card-issuing bank under the GSA SmartPay program, it plans to implement the Prime Vendor program at the facilities that have not yet done so. This will total approximately 100 additional accounts, including two Consolidated Mail Out Pharmacy facilities which process about \$10 million each per month. This should result in a significant increase in the utilization of the Prime Vendor payment mechanism. For FY 1999, VA anticipates processing \$1.3 to \$1.4 billion through this program. VA anticipates full implementation of the program for pharmacy services by the end of FY 1999 and has plans to expand, as appropriate, to other Prime Vendor contracts. In the coming months, other agencies will be investigating the possibility of using mechanisms similar to that used for VA's Prime Vendor payment program.

D. Improving Non-recurring, Small Value Payments

Accomplishment: For cases where no fully electronic means of payment are readily available, agencies are using the best available commercial tools while the government works to develop additional options.

While VA has developed an effective means to process payments for recurring, high dollar-value purchases, other agencies are in the vanguard of adopting commercial payment mechanisms to effect transactions at the other end of the spectrum: non-recurring, small-dollar transactions. While these payments are also generally unsuitable for credit card payments, the GSA SmartPay contract does afford agencies the opportunity to utilize “convenience checks” to make these small payments that would otherwise be made from an imprest fund, also known as “petty cash.”

Imprest funds are a traditional expedient for making small-value disbursements. However, internal controls are difficult to enforce, leaving imprest funds vulnerable to inappropriate use. In addition, physical security of these funds is a great concern because of the possibility of theft. Although the total amount in a given fund may be relatively small, the effort necessary to manage and account for it is not. Convenience checks provide an alternative to imprest funds that some agencies are investigating. Convenience checks are not fully electronic; they require a paper check to be written. Therefore, Treasury does not consider them to satisfy the EFT requirements of the Debt Collection Improvement Act (see below). Treasury has recognized the usefulness of such mechanisms, however, and has established a set of pre-authorized circumstances in which they may be used.¹⁶ However, convenience checks are processed by the same mechanisms as purchase card transactions, and the data from the processor (the card-issuing bank), including payee information, enters the agency’s financial accounting system through the same interface as ordinary card transactions. In this way, convenience checks are being used to significantly reduce the number of imprest funds, improving management controls while reducing manual intervention in the accounting for these expenses.

Under the GSA SmartPay program, DOI used convenience checks in a Bureau of Land Management (BLM) pilot as a means of purchasing and paying for goods and services in instances where vendors do not accept charge cards. This approach provides increased assurance that goods and services required for programs such as emergency fire-fighting will be available when needed. It also helps make the payment process easier and facilitates bureau finance offices’ moving to “best value paying” (i.e., minimizing the cost of making payments), through a consolidated payments process. That is, since a single payment made to the GSA SmartPay card vendor covers many purchase transactions, including those made using convenience checks, this approach reduces administrative burden and simplifies the payment process. For example, the convenience check transactions, like all GSA SmartPay transactions, are entered into the accounting system through a single automated interface.

¹⁶ See 31 CFR 208.4 for a listing of the waiver categories established by Treasury under which agencies may make non-EFT disbursements.

In sum, the DOI convenience check program will:

- ❑ Make the buying and paying process easier and more efficient by making better information available more quickly. The back-end (payment) process will reduce unnecessary paperwork and attendant administrative cost and delay.
- ❑ Take advantage of a commercial information processing application, the GSA SmartPay vendor's electronic access system.
- ❑ Utilize an existing, proven commercial mechanism, the credit card payment infrastructure, consistent with the Administration's policy of preferring commercial systems wherever appropriate.

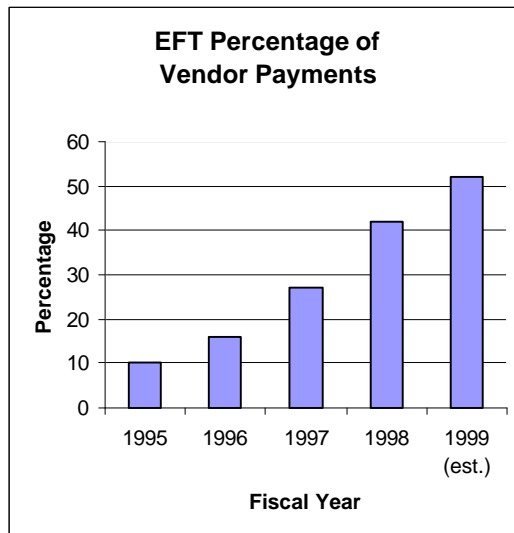
Next Step: Continue to develop fully electronic options for difficult payment requirements. For those cases where no fully electronic options are appropriate, consider the use of third-party payment mechanisms with electronic interfaces, such as convenience checks.

DOI is expanding the BLM pilot to all appropriate bureaus. DOI will use convenience check disbursement accounts as part of its overall effort to eliminate imprest funds at 1400 field locations, particularly for low volume, low dollar value payments. The convenience check disbursement accounts will replace imprest funds, and will be issued under the direction and oversight of finance officers in order to preserve accountability, maintain or improve data integrity, and ensure that adequate management controls are in place. OMB and DOI believe that in a properly controlled environment and for a specific, small universe of payment types, convenience checks offer a cost-effective alternative to cash disbursements, where electronic payment mechanisms are not otherwise possible or practicable. Moreover, the cost of such transactions (in DOI's case, a net of .9% of the transaction amount after a 1% refund) is low relative to the total cost of making a cash disbursement from, for example, an imprest fund.

In order to make more tools available to agencies to make electronic payments to a larger universe of vendors, Treasury is investigating and piloting the use of innovative payment mechanisms for low value payments to individuals, infrequent vendors, and others. These efforts will result in a reduced number of instances when paper checks, even third-party drafts such as convenience checks, are necessary. Examples of these efforts include investigations of electronic, Internet-based checks, and expanded use of stored value cards that can be distributed in lieu of cash or checks. Treasury will continue to pursue these mechanisms to reduce to the absolute minimum agencies' reliance on paper checks.

E. Making Payments by Electronic Funds Transfer

Accomplishment: The government has made significant progress in compliance with the Debt Collection Improvement Act's EFT requirement.



The Debt Collection Improvement Act (DCIA) of 1996 mandates that most Federal payments be made electronically by 1999. The law requires Treasury to prescribe regulations to implement the Act and to grant waivers from the requirement to receive payments electronically. It is estimated that compliance with the electronic funds transfer (EFT) provisions of DCIA will save the Federal government \$100 million a year. In moving toward the effective date of the Act, the government increased the number of non-tax payments made electronically from 55% in FY 1995 to over 72% as of January 1999. Currently, Treasury is issuing 100 million fewer checks than it issued in 1995, resulting in significant savings from reduced paper, printing, postage, and processing costs. In addition, the government has increased the percentage of benefit

payments made electronically from 54% in FY 1995 to more than 72% in January 1999. Most relevant to the purposes of this report, the percentage of vendor payments made electronically has increased from 10% in 1995 to 52% as of March 1999.

Next Step: Continue to increase the use of electronic payment mechanisms to implement the EFT requirement of the DCIA.

Treasury will continue to monitor agency compliance with the EFT regulations and continue to work with agencies that are not in compliance to identify and resolve issues that are adversely affecting the agencies' EFT conversions. In addition, Treasury is working with agencies to develop more electronic payment tools for those cases where current options are not sufficient. For example, Treasury is conducting pilot studies on the use of Internet-based electronic checks, stored value cards for small payments to individuals, and other mechanisms to allow agencies to maximize their use of electronic means for payment.

F. Updating Government Payment Systems to be More Modern and Effective

While the government is committed to the use of commercial services and products whenever appropriate, there are instances where a government-developed system is a legitimate, even necessary approach. For example, “off the shelf” systems or service providers to effect the transfers of more than \$400 billion each year between Federal entities are not readily available. Clearly, the development of a custom system, though a last resort, is not inappropriate in these circumstances. The process used to develop and implement the system is, however, of critical importance. It is of the greatest importance that sufficient resources and properly skilled personnel are available to the project to ensure its success.

The replacement of Treasury’s On-line Payments and Collections system (OPAC) is such a government-developed system. The major objective of this effort is to migrate existing OPAC systems and subsystems to state-of-the-art government operated platforms, while enhancing essential system functionality. The new system, called IPAC (Intra-governmental Payments and Collections system), will be used to make intra-governmental funds transfers for all types of non-retail intra-governmental transactions.

Accomplishment: Treasury has begun the development of a new and improved system for effecting many intra-governmental transfers.

In developing IPAC, the project team conducted focus groups, interviews, and surveys with user agencies to determine their needs for the new system. They also compiled audit reports from various sources (the General Accounting Office (GAO), Inspectors General, etc.) that cited deficiencies with the existing OPAC system. All of this information was utilized to develop detailed functional specifications that will inform the development and operation of the new IPAC system. These functional specifications include many enhancements to the current OPAC system to alleviate audit deficiencies, as well as to take into consideration the needs of the customer agencies.

3 Tier Applications

A 3-tier application is one in which portions of the application are distributed among three parts:

- 1. The user interface*
- 2. The “processing engine”*
- 3. The data base*

Because the elements of a 3-tier application are separate, each can be developed and upgraded independently. If the application complies with Internet protocols, the interface tier is represented by the web browser. In this configuration, the use of commercial software is maximized and system upgrades are facilitated.

Treasury used industry standards wherever possible in developing IPAC, consistent with OMB guidance and the Administration’s EC policy principles. For example, an industry-standard 3-tier web-based platform has been selected for IPAC. This architecture will accommodate the remainder of the old OPAC subsystems and will support Electronic Data Interchange (EDI) technology. Several application prototypes have been developed on this new platform and have been well received by user agencies. Industry-standard operating rules and dispute resolution

procedures will be employed wherever possible, and IPAC system edits will support these rules and procedures.

Next Step: Treasury will continue to develop the IPAC system to perform many types of intra-governmental transfers.

The next several months of IPAC development will be spent in detailed application design, which will include screen design and report layouts. Once this is completed, the project team will move into the actual construction and testing of the applications. The following phases will be agency training and implementation. Final implementation is currently scheduled for the Spring of 2001.

Identification and Authentication

Ensure that electronic transactions are conducted with appropriate assurance of security so that buyers and sellers can be properly identified and authenticated and information can be shared without compromising confidentiality and integrity.

Many of the advantages of EC flow from the use of a global, public, electronic network: the Internet. These advantages do not accrue without some drawbacks, however. In an open network like the Internet, ensuring the security of communications and transactions is challenging. Without adequate security, identities can be forged, communications compromised, transactions repudiated, and unauthorized individuals can access private systems. Recourse for such breaches is even more problematic because jurisdiction may be unclear. Fortunately, industry has developed a number of technologies, techniques, and systems for addressing these issues.

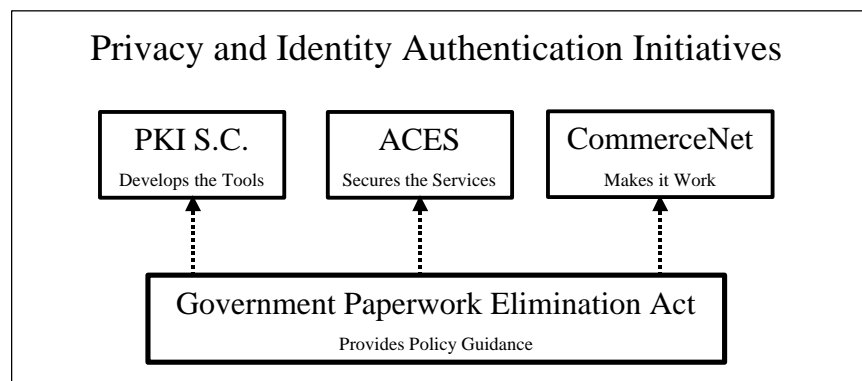
Access Control

Access control to systems or information is usually effected through evaluation of one or more of the following:

- *Something you have: e.g., a plastic card.*
- *Something you know: e.g., a PIN.*
- *Something you are: e.g., your fingerprint.*

While none of these mechanisms is foolproof and they are most effective when used in combination, there appears to be movement in government and industry toward incorporating the third option, biometric controls, in more instances where determining identity is critical.

Most of the concerns related to authentication, confidentiality, and message integrity can be addressed in the context of a Public Key Infrastructure (PKI). For this reason, the government has directed much of its efforts to developing a PKI. While technically complex, the essence of PKI is simple: A trusted third party “vouches” that electronic communications are legitimate, that is, that the parties involved are who they claim to be and that their communications are reliable and unaltered. The workings of PKI are described in some detail below. A more explicit definition is available at <http://gits-sec.treas.gov>.



Each of the government's efforts in this area has improved the understanding of the principles and practical applications of authentication, confidentiality, and message integrity mechanisms. Efforts to use PKI, digital certificates, and electronic signatures have applications

that extend beyond buying and paying. In addition, while each program described below stands as an achievement in its own, they can be usefully viewed as related and complementary.

A. Establishing a Public Key Infrastructure in the Federal Government

Accomplishment: The PKI Steering Committee has established the foundation for ensuring authentication, confidentiality, and message integrity in Federal transactions.

To ensure that the government addresses successfully the challenges related to authenticity, integrity, and confidentiality of electronic transactions, the government Information Technology Services (GITS) Board, under the aegis of OMB and the NPR, established the Federal PKI Steering Committee. This government-wide committee is chaired by the GITS Board's "Champion for Security" and consists of senior representatives from all of the Federal agencies employing or considering the use of public key technology. The purpose of the Steering Committee is to provide leadership within the Federal government during development and implementation of agency-specific and government-wide PKI. Toward this end, The Committee issued "Access with Trust" in September of 1998 to provide a framework for fostering safe, secure electronic interactions.

Public key technology can provide a mechanism for creating the trusted environment necessary for electronic transactions to flourish over open networks like the Internet. In particular, public key technology can provide strong authentication of users (transacting parties), help to ensure the integrity of data by revealing inadvertent or deliberate alteration, provide mechanisms for non-repudiation of transactions, and support the confidentiality of private information. Public key technology does this without the need for shared secrets like personal identification numbers or passwords, which are susceptible to compromise. Moreover, public key technology is scalable and extensible, that is, a solution for one application can be adapted for others.

Public Key Infrastructure

A PKI establishes trust between transaction partners, even those who have never met, by extending the trusted relationships from entities already known to each of the transaction partners to those that might not be previously known. In essence, a trusted third party known as a "Certification Authority" (CA) verifies an individual's identity and issues that individual a digital certificate that allows the sender to bind his identity to messages he sends.

Messages can be digitally signed by the sender using one half of a "key pair" that is comprised of a "public" key and a "private" key. These keys are made up of very large numbers that have a mathematical relationship that allows messages encoded with one key to be decoded with the other. Essentially, the message is encoded by the sender using the recipient's public key and a "digital signature" (a mathematical expression unique to each message), is created by the sender using his own private key. The recipient then decrypts the message using his private key and verifies the identity of the sender by using the sender's public key, obtained in the form of a digital certificate, to validate the digital signature.

In this way, the trusted third party extends its sphere of trust to include the previously unknown transaction partner. For a more detailed explanation of encryption and Certification Authorities, refer to "Access with Trust" located at <http://gits-sec.treas.gov>.

Consistent with the government-wide EC strategic plan, the PKI Steering Committee is guiding PKI development efforts to: (1) use commercially available technology and products; (2) encourage interoperability and scalability; and (3) maintain technological neutrality. Development is well under way. At present, most agencies are focusing their PKI efforts on intra-agency and interagency applications, but the Steering Committee intends to move toward supporting transactions with external agency trading partners and the public.

There are several dozen pilot efforts within Federal agencies using public key technology, with user populations ranging from very small to moderate (hundreds to thousands) in size. These pilots have helped to work through and demonstrate a variety of technical, business, and legal issues related to PKI. Many of these pilots were intended to develop fundamental technical issues, while others were more applied. For example, a pilot project with the National Institute of Standards and Technology (NIST) established the use of PKI for digital signatures in a system to produce purchase order requests and electronically route them. The PKI Steering Committee expects pilot efforts to increase. During the remainder of calendar year 1999, several of the incipient pilots will move to production use, involving thousands to tens of thousands of users.¹⁷

Next Step: The PKI Steering Committee will continue to work to provide government-wide coordination of PKI initiatives.

To support the creation of a government-wide PKI, the Steering Committee is developing: (1) a Concept of Operations document for a Federal PKI Policy Management Authority which would oversee Federal PKI interoperability efforts; and (2) a Federal Bridge Certification Authority which will permit disparate agency public key infrastructures to interoperate seamlessly. The Bridge will operate under the National Technical Information Service of the Department of Commerce (Commerce). It is under development with plans for deployment in early 2000. The Bridge is intended to support operation with all commercially available products and services for public key technology.

The PKI Steering Committee is also preparing more detailed technical guidance for the use of public key technology by agencies. The guidance will stem from the final OMB policy guidance implementing the "electronic signature" provisions of the Government Paperwork Elimination Act (GPEA), discussed in greater detail below. The PKI Steering Committee anticipates that their guidance will be available by March 2000.

¹⁷For a complete listing of Federal PKI pilot programs, see <http://gits-sec.treas.gov>.

B. Contracting with Certification Authorities: ACES

As described above, public key cryptography is viewed as the best option for assuring the authenticity, confidentiality, and integrity of electronic transactions. GSA's Office of Government-wide Policy and Federal Technology Service (FTS) has initiated a project to promote the development a commercial public key infrastructure. Under that program, called the "Access Certificates for Electronic Services" (ACES) Program, Federal contractors will issue public key certificates to individuals that enable them to use digital signatures in their dealings with the Federal Government. Using these digital signatures, business partners, customers, and others dealing with the government will be able to gain authenticated electronic access to government information and services and conduct business with the government electronically. These digital signatures will also answer the need for information privacy and programmatic integrity.

The ACES program was developed in response to the February 1997 report *Access America*, issued by the NPR.¹⁸ That report called for Federal agencies to provide electronic access to the public for a wide range of government services and information, such as: access to health and social security information, electronic tax filings, electronic application for student aid and grants. By creating the public key infrastructure necessary to enable digital signatures, the ACES Program will facilitate business process re-engineering by Federal agencies.

As envisioned in the *Access with Trust* report supplementing *Access America*, under the ACES program the government is seeking to work with industry to create a secure and trusted public key infrastructure. Under ACES, GSA will award contracts to qualified entities that will provide public key certificates to individuals. As explained below, initially those certificates will be made available at no cost to subscribing individuals; agencies will pay for the contractors' services. The contracting strategy provides for the award of contracts to all contractors who are technically qualified and otherwise responsible and are willing to provide the services at the price offered by the offeror submitting the lowest evaluated price. This approach will stimulate the development of a robust public key infrastructure that the Federal government can use while minimizing costs through aggregating the government's demand under government-wide competitive procurement.

Accomplishment: GSA has issued the RFP and received proposals from vendors for the ACES program to establish government-approved Certificate Authorities.

The ACES Program has built the foundation for a secure public key infrastructure through the following key building blocks.

Common Trust Model - The ACES model uses a common Certificate Policy for digital signatures that defines the certificates and the roles, responsibilities, and obligations of all parties. GSA will ensure compliance to the common certificate policy through binding agreements among the parties involved in the ACES Public Key Infrastructure.

¹⁸ See <http://gits.gov>.

Strong Identity Proofing - Federal agencies will be able to rely on ACES certificates because of the strong identity proofing required by the ACES contracts. Individuals may be authenticated through a detailed, electronically submitted application or by personal presence. Identification must be confirmed via a GSA-approved identity-proofing process that incorporates submission by the applicant of at least three individual identity items which must be verified through reference to multiple independent data sources along with cross-checks for consistency.

No Direct Cost to Subscribing Individuals - The ACES Program is built on the principle that in order to achieve widespread certificate use by the public, the initial distribution of certificates should be at no direct cost to subscribing individuals. Individuals will obtain public key certificates from the ACES contractor of their choice. Agencies will pay contractors based upon the agencies' use of the contractor's certificate validating services.

Interoperability - In accordance with the principles of the PKI Steering Committee's *Access with Trust*, all agency applications participating in ACES will accept certificates issued by all ACES contractors. Therefore, government-wide interoperability of certificates and public key services represents a core requirement of the ACES Program.

Next Step: In coming months, GSA will award and begin to administer the ACES contracts.

Contract Award - ACES proposals were received in April of 1999. GSA invited a number of agencies to participate in source selection to ensure ACES meets the unique requirements of all interested parties. The ACES request for proposals attempted to balance agency needs while still allowing commercial creativity in defining best practices. Contract awards are projected for the Summer of 1999.

Implementation Support - GSA and ACES contractors will work with agencies to build applications that use and accept ACES certificates. To support the Access America for Students Program, work has begun at several agencies (Departments of Education and VA, Social Security Administration, US Postal Service) to implement agency applications in FY 2000.

C. Working with Industry to Pilot Secure Catalog Transactions.

Accomplishment: Working with industry, the government has begun to develop a means for authenticating buyers on electronic catalogs.

As described above, in the building block on Electronic Catalogs, a variety of Federal agencies, including GSA, NASA, and DoD, have been working with CommerceNet, a non-profit industry consortium, to improve the functionality of electronic catalogs. One of the objectives of the pilot was to demonstrate the effective application of front-end user authentication technologies and methods to provide secure access to the catalogs and their interoperable search capabilities.

During the pilot, buyers inserted a “smart card” into a reader attached to their computer. A personal identification number was used to authenticate the buyer to the smart card. The security package on the buyer’s computer interacted with the security server to authenticate the buyer to the system. For every query, the buyer information was compared with the access control list located with each database. Pilot agencies believed the test successfully demonstrated one mechanism for achieving reliable front-end buyer authentication.¹⁹

Smart Cards

Smart cards are plastic cards, similar in appearance to credit and debit cards, but with processor chips embedded in the plastic. These chips can be used for simple functions, such as stored value in such devices as phone cards, or more complex applications.

Smart cards can be used as “secure, portable tokens” to authenticate identity for physical access to a building or logical access to a system. Within the context of a PKI, an individual’s private key can reside on the card and signing or decryption can be performed with the card more securely than on a computer drive. In combination with a biometric identity verification, smart cards offer the potential for unparalleled security in these authentication schemes.

Next Step: Seek to apply authentication techniques to both buyers and sellers to enable secure catalog ordering and payment.

For the next phases in this project, the government, working with industry, will attempt to provide a common business model for buyer and seller authentication and end-to-end security for messages and transactions (i.e., catalog searching, ordering and payment). This phase will test expanded security and user authentication using smart cards to generate digital signatures within a PKI context for common authentication processes.

¹⁹ For additional information on this project, see www.commercenet.com/projects/currentprojects/catalog-interoperability.

D. Implementation of the Government Paperwork Elimination Act

Accomplishment: OMB has published initial agency guidance on the Government Paperwork Elimination Act's electronic signature requirements.

In a major step toward ensuring the security of electronic transactions, the Government Paperwork Elimination Act (GPEA) provides for Federal agencies to: implement electronic filing systems; to eliminate wherever practical, the need to retain paper records; and to use electronic authentication methods to verify the identity of transaction partners and the integrity of electronic content. The Act, which is intended to remove barriers to the ability of citizens to interact with the Federal government electronically, specifically provides that electronic records and their related electronic signatures are not to be denied legal effect, validity, or enforceability merely because they are in electronic form.

Electronic signatures vs. digital signatures

While an electronic signature can be virtually any electronic means of identification, the term "digital signature" refers to a particular methodology for validating authorship of an electronic document. Creation of a digital signature involves a multi-step process that creates a unique numeric expression that identifies the creator of the document, links that identity to the document, and allows recipients to be sure that the document's contents have not been

OMB is developing policies and procedures to implement the Act and is working with Federal agencies to achieve an efficient transition to EC. The OMB guidance required by the Act was published in proposed form in the Federal Register on March 5, 1999. During the comment period, OMB will engage in outreach efforts to educate Federal, state/local, and private sector stakeholders on the objective of the guidance.

Next Step: OMB will finalize its GPEA guidance and agencies will begin to develop their implementation strategies.

On July 5, 1999 the comment period on OMB's proposed guidance for agencies' implementation of the GPEA closes. OMB will analyze the comments received in order to determine whether the proposed guidance should be issued as interim guidance pending the examination of "lessons learned" from ongoing pilots, or whether it should immediately be finalized. In October 2003, Federal agencies will complete their initial GPEA implementation efforts.

E. Managing Seller Information

Accomplishment: DoD is pursuing efforts to streamline and reduce the burden associated with the collection of seller information through the use of a central contractor registration database.

In addition to ensuring that buyers and sellers can be properly identified and their messages authenticated, Federal contractors must also provide data to the government about themselves and their businesses. As identified in the government-wide strategic plan, agencies have at least three options for managing this data: (1) through a central registry, in which sellers could centrally provide information for multiple contracts; (2) through financial intermediaries (networks), would could collect and maintain information on network members; and (3) on a contract-by-contract basis. DoD has elected to use a Central Contractor Registration (CCR) database to collect and manage contractor information. The CCR is designed to simplify and streamline processes relating to the collection and use of vendor information both for sellers and buyers by eliminating duplicate requirements and processes. Sellers are able to reduce the number of times they provide information. Procurement officials may go with confidence to one place to check a seller's registration status and obtain pertinent information prior to awarding a contract.

The CCR includes taxpayer identification numbers (TINs) and electronic funds transfer (EFT) information required by the Debt Collection Improvement Act of 1996 (Public Law 104-134). It also contains data identifying the type of equipment, supplies and services that a potential supplier may be interested in offering, along with other information previously collected manually in the Solicitation Mailing List Application (Standard Form 129), e.g., size status, eligibility status, business type. In this way, the CCR helps increase the visibility of vendor sources for specific supplies and services.

As of June 1, 1998, all contractors wishing to do business with DoD are required to be registered in the CCR in order to receive contract awards from the DoD for solicitations issued after May 31, 1998.²⁰ DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. As of March 1999, there were over 141,000 active registrants in CCR.

The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the government's reliance on inaccurate or incomplete data. Accordingly, following a one-time initial registration, the contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

Next Step: Undertake further assessment to evaluate agency practices regarding vendor data collection.

²⁰ For DoD guidance on contractor registration, see DoD FAR Supplement (DFARS) Subpart 204.73. For additional background, see 63 Fed. Reg. 15316 (March 31, 1998). Information for offeror and contractor registration and annual confirmation requirements is provided at <http://ccr.edi.disa.mil>.

Under EPIC's leadership, an assessment will be conducted of current agency practices. The assessment will consider burdens currently placed both on sellers (e.g., burden of providing redundant information) and buyers (e.g., cost of collecting information, ability to ensure integrity of information). EPIC will work with DoD and other agencies to consider pilots to inform this evaluation.

Track 3: Reengineering Additional Buying and Paying Functions

EC can enhance the government's ability to simplify key functions of the acquisition cycle for many different types of buys in different dollar ranges, even where "end-to-end" use of commercial EC services is not yet possible or is otherwise impractical. For example, EC can be used to improve access to contract opportunities, enhance other steps in the contract formation process, and enable better collection, use and exchange of data across functional offices within the government. The third track of activities focuses on efforts to improve these key functions through the use of EC.

Contract Formation and Administration

Make contract formation and administration easier and more effective for buyers and sellers (including small businesses), through use, among other things, of electronic market research tools, and participation in pilot efforts to enable sellers to gain electronic access to government business opportunities through a single, government-wide point of entry.

To create and administer contracts that provide good value for taxpayer dollars, a buyer (among other things) must have a keen understanding of what the market offers, the ability to gain effective access to the marketplace, a way of efficiently and effectively negotiating with interested sources, and an administratively efficient means to ensure that sellers are keeping to the bargain during contract performance. Sellers, in turn, must be afforded easy access at minimal cost. To these ends, the government is striving to take advantage of technological advances to improve the way it performs key functions of the buying processes in the formation and administration of its contracts.

A. Improving Access to Business Opportunities

Accomplishment: Through pilot efforts, agencies across government have better positioned themselves to provide sellers with electronic access to business opportunities through a single, government-wide point of entry.

In 1998, GSA, NASA, DOT, the Air Force, Treasury, and Commerce formed a team to pilot a multi-agency posting system, the Electronic Posting System (EPS).²¹ EPS is designed to enable agency buyers to make notices of requirements, solicitations, awards and other acquisition-related documentation accessible on the Internet to vendors.²² Access is intended to be easy and convenient through a variety of search and downloading tools through one uniform resource locator (URL) address. Each participating agency agreed that at least one of its procurement activities would post all applicable solicitations on EPS.

²¹ See <http://www.eps.gov>.

²² In this regard, EPS furthers section 30 (e) (5) of the OFPP Act, which tasks the government with examining the merits and feasibility of providing additional contract information electronically to the public.

EPS is based on the NASA Acquisition Internet Service (NAIS), a system created by NASA in 1997 to permit procurement staff anywhere in the agency to make notices and solicitation files accessible on the Internet from a single point. In a recent report, the GAO found that NAIS serves as a simple, effective, and user-friendly central electronic source of procurement information from NASA's decentralized facilities.²³ According to the report, feedback from NAIS users, particularly small businesses, has generally been positive. In addition to improving access to NASA contracting opportunities, the GAO found that NAIS has enabled NASA to streamline the process for preparing and issuing notices and solicitations. Among other things, NAIS automatically formats notices, performs edit checks, automatically posts notices on the Internet, and makes solicitation files available for immediate review and retrieval.

Based on EPS' current functionality, sellers may:

- ❑ search and identify, at one location, notices of and solicitations for competitive business opportunities and awards over \$25,000 from all pilot participants;²⁴
- ❑ search for business opportunities by, in any combination, type of product and/or service, location (e.g., agencies, offices), or posting date;
- ❑ receive an automatic e-mail notification about contracting opportunities in specific categories or locations of interest;
- ❑ receive an automatic e-mail notification of changes and amendments to solicitations;
- ❑ locate and download documents related to a specific procurement;
- ❑ view summaries of contract awards (with contractor name, value, obligations, and description); and perform searches (by agency, office or region, type of product, date of award, or award number).²⁵

EPS allows interconnection with agency posting systems and other EC applications that have been or will be developed to enhance their buying practices.²⁶ Because EPS is based on a distributed architecture that allows centralized access with decentralized maintenance, EPS is intended to provide government-wide information to vendors through a single point of entry without disrupting, eliminating or otherwise requiring the replacement of current individual agency EC applications. For example, EPS will interconnect with DoD's "Business Opportunities System," a system that is being rolled out in DoD to facilitate access to business opportunities in DoD from a single point. Vendors wishing to learn about opportunities at DoD

²³ See *ACQUISITION REFORM: NASA's Internet Service Improves Access to Contracting Information*, GAO/NSIAD-99-37 (February 1999).

²⁴ Sellers may also find information on business opportunities below \$25,000. The Air Force, for example, uses EPS to publish solicitations below \$25,000 when they wish to solicit widespread competition.

²⁵ EPS provides access to award notices posted by agency contracting officers. At a minimum, synopses of contract awards made by pilot agencies that are currently published in the CBD (e.g., because the award exceeds \$25,000 and is subject to the Trade Agreements Act or is likely to result in the award of any subcontracts) may be found on EPS.

²⁶ EPS and other related buying and paying systems may eventually share available databases to facilitate agency data collection processes, reporting, and forecasting, among other things. Such an effort might help to reduce burden and achieve greater consistency in these undertakings.

and at other agencies simply can go to EPS. They would not need to go both to EPS and the Business Opportunities System.

The EPS software is designed as a modular “freeware” application (i.e., software applications are provided without charge to agencies). An EPS users group meets monthly to identify and correct software weaknesses, evaluate progress, and share ideas for enhancing EPS functionality. With respect to enhanced functionality, for example, the user group is working to provide secure vendor upload using PKI so that offerors can send authenticated offers to buyers over the Internet. It is also working to allow buyers, in accordance with law and regulation, to direct access to a limited number of qualified vendors (e.g., communicating electronically with three sources for an open market purchase below \$25,000 in lieu of, or in addition to, telephonic communication; controlling access to documentation where classified specifications are involved).

Next Step: EPS will be evaluated to determine if it can enable the government to provide notices, solicitations, and other related documents through a single point of entry.

Since the inception of the EPS pilot in July 1998, nearly 11,000 postings (e.g., synopses, solicitations, amendments to solicitations and other information, award notices) from over 2200 registered users on the system have been made on EPS and almost 17,000 vendors have signed up for electronic notification of posted opportunities.²⁷ The majority of this activity has occurred since December 1998. For example, the number of vendors signed up to use EPS has grown by approximately 200 in each business day in May 1999.

Pilot agencies are optimistic about EPS’ potential. In September 1998, GSA declared EPS the single, agency-wide electronic system through which it will solicit quotations, bids, and proposals.²⁸ GSA made this decision after concluding that EPS can reduce the costs and improve the efficiency of its acquisition process by replacing existing systems with duplicate functionality.²⁹ Since October 1998, all NASA competitive business opportunities over \$25,000 in estimated value have been published to the EPS site. Initial customer feedback to DOT users indicates general satisfaction and DOT considers the EPS functionality to be an important component of its EC implementation plan. DOT intends to make use of EPS mandatory within the department beginning on October 1, 1999.

The pilot agencies, with the assistance of the EC Committee of the PEC, are evaluating EPS to help inform senior officials of the feasibility of EPS effectively serving as the government-wide single point of entry to procurement information. This evaluation will consider the following factors:

²⁷ These figures reflect activity as of early June 1999.

²⁸ See 63 Fed. Reg. 48733 (September 11, 1998). GSA provides paper copies of solicitations and attachments in cases when it does not anticipate adequate competition for an acquisition if the solicitation is only made available electronically, when documents are not available electronically, or when release of drawings, exhibits or other attachments must be controlled to ensure adequate security.

²⁹ Similarly, most of the operational contracting sites at the Air Force now rely on EPS to post notices and solicitations and send notices to CBDNet and no longer maintain separate web sites for these purposes.

- (a) *benefit to agency buyers* – the ability of EPS to enable buyers to increase their efficiency in preparing and synopsising business opportunities in a cost-effective manner;
- (b) *accuracy* – the ability of EPS to post information in a timely, accurate, and consistent manner to provide vendor access through a single point of entry;
- (c) *user friendly search capabilities* – the ability of EPS to enable user friendly searches (e.g., that could be easily and effectively performed to identify contract opportunities); and
- (d) *effective interconnectivity* – the ability of EPS to provide access to information without disruption to current EC applications.

If benefits are found to be sound and the anticipated cost of rollout and ongoing maintenance is reasonable so that the return is high (in comparison to other evaluated alternatives), the Administrator of OFPP will consider designating EPS as the single government-wide point of entry and the FAR will be changed to reflect this designation. Upon such designation and FAR change, agencies government-wide would be expected to use EPS for posting their notices. In addition, they will be encouraged to make their solicitations available through EPS.

Until EPS or another system has adequately demonstrated the capability to serve as the single, government-wide point of entry for notices and solicitations, the *Commerce Business Daily* online, “CBDNet” will continue to provide a single entry-point for notices. CBDNet currently provides convenient and universal user access to notices through a single, government point of entry.³⁰ EPS provides an interface with CBDNet so that notices transmitted to EPS may be automatically provided to CBDNet. This linkage ensures continual electronic access for sellers to Federal contracting opportunities above \$25,000. It will also help ensure that any transition is seamless both for buyers and sellers.

Next Step: Seek legislation to ensure the statutory framework addressing the provision of notice permits agencies to take maximum advantage of the efficiency offered by EC in improving access to the government’s business opportunities.

In its report on NAIS, the GAO recommended that the Administration propose changes to the statutory procurement notice requirements in the Small Business Act and the OFPP Act if it concluded that the current framework is inhibiting agencies' ability to take maximum advantage of the efficiency offered by electronic commerce in improving access to the government's business opportunities. In light of the success of CBDNet and NAIS, and ongoing EPS pilot efforts, the Administration believes it would be beneficial for the current statutory framework to expressly

³⁰ Notices of all open market contract opportunities above \$25,000 that would otherwise be published in the paper version of the CBD are published in CBDNet. For a breakdown of activity through CBDNet by agency, see Table 2 of Appendix C.

recognize that publication requirements can be satisfied with use of electronic notification through a single government-wide point of entry. This clarification is especially important in light of a recent case by the United States Court of Federal Claims, *FN Manufacturing, Inc. v. United States*, 41 Fed. Cl. 186 (1998) which, despite the efficiencies of electronic commerce, held that for all acquisitions above the simplified acquisition threshold, the waiting periods associated with publication begin only upon issuance of a notice in the printed hard-copy version of the CBD. As the government improves its ability to effectively utilize electronic commerce, it is important that it be able to transition, along with its business partners, from paper-based to paper-free processes. Only the system designated in the FAR as the single government-wide point of entry would have status to satisfy the publication requirement as an alternative to hard-copy publication.

The Administration further believes that the current requirement to wait 15 days after publication of a notice before issuing a solicitation should be modified to appropriately reflect the efficiencies of EC. Minimum time periods, which before 1983 were left to regulations, were set forth in statute to ensure timely delivery of notices and solicitations through a paper-based mail delivery system. Congress established the 15-day minimum interval between publication of a notice of procurement action and the issuance of a solicitation -- five days longer than what had been set forth in regulation -- to address "problems regularly caused by delays in the receipt of the Commerce Business Daily."³¹ With electronic commerce, these documents can be made available immediately. Shortening (or eliminating) the 15-day time period where the notice (or both the notice and solicitation) are furnished electronically would enable the government to take advantage of this efficiency -- including the acquisition of other than commercial items where reductions in the 15-day period are not currently authorized -- without affecting the ability of interested sources, including small businesses, to learn about, and respond to, contract opportunities.

In May 1999, the Administration transmitted a legislative proposal to Congress to enable agencies to take full advantage of EC in improving access to government business opportunities. A copy of the proposal is set forth at Appendix D.

³¹ See 129 Cong. Rec. 1389, 1391-92.

B. Using EC to Improve Other Aspects of the Contract Formation and Administration Process

Accomplishment: Agencies have undertaken organized efforts to use EC to improve various aspects of the contract formation process (in addition to improving access to business opportunities) and the contract administration process.

Individual agencies are taking advantage of EC to improve the efficiency of proposal receipt, communications with interested offerors, proposal evaluation, and contract award. For example:

- ❑ NASA recently completed a six-month forms-based pilot to demonstrate the ability to receive quotes electronically using existing desktop and commercial-off-the-shelf (COTS) software over the Internet for commercial item buys between \$25,000 to \$100,000. The vendor community, primarily small businesses, gave supportive feedback
- ❑ The NIH National Institute for Allergy and Infectious Diseases has developed an Electronic Proposal and Review System for use in both the contract and grant environment. The solicitations and applications are posted on a web site and proposals and applications are received electronically. When submissions are complete, reviewers complete their evaluations and discuss each others' comments on line through a "chat room." As a result, complete and detailed evaluation reports can be submitted more quickly assisting contracting personnel in conducting earlier and more effective negotiations.
- ❑ Some agencies use FACNET as a tool to facilitate small dollar commodity purchases electronically where widespread notice is desirable. FACNET provides for the offeror to receive a request for proposal, submit an offer, and receive an order electronically, thus completing the contract formation process electronically.

With respect to contract administration, agencies continue to find that the utility of contractor past performance information can be enhanced through easier government access to such information. For this reason, agencies are increasingly using EC to collect and retrieve past performance information. Today, for example, for a nominal fee, approximately 3400 users nationwide from 10 Federal agencies are using the NIH Contractor Performance System to collect and maintain their contractor evaluations. At least three additional agencies are planning to use the system in FY 1999.

Next Step: Share promising achievements and undertake pilots to build on the accomplishments of other agencies.

Agencies continue to demonstrate their interest in working towards electronically enhanced contract formation and administration processes. For example, the Army Communications Electronics Command (CECOM) has fielded an interactive web-based application, the Interagency Interactive Business Opportunities Page (IBOP) to take advantage of the Internet in creating and administering contracts. Among other things, IBOP:

- ❑ enables electronic release of market surveys and investigations, draft solicitations and final solicitations;
- ❑ allows interested offerors to submit bids or proposals back to the contracting officer directly on the Internet without having to re-key responses;
- ❑ allows secure access to proposals, including proprietary and business sensitive information, using commercially available groupware and secure socket layer security; and
- ❑ enables issuance of electronic contract modifications and delivery orders.

The State Department has been working with CECOM to take advantage of IBOP's functionality to improve the efficiency of its own processes. State is finding a solid return for its investment in IBOP. It has found start-up and maintenance costs to be low and administrative savings to be high (e.g., in producing and publishing solicitations, in giving government evaluators access to proposals without having to travel). More than 20 of State's posts abroad now take advantage of IBOP. Other entities using IBOP include DOE, United States Special Operations Command, and the Space and Naval Warfare Systems Command. IBOP users have formed an interagency EC collaboration working group to share lessons learned and discuss enhancements of potential mutual benefit.

The collaboration between Army and the entities identified above is but one example of the type of cooperation that is necessary if the government is to leverage its EC investments. For this reason, this type of partnering will continue to be encouraged.

Contract Writing Systems

Use contract writing systems, where appropriate, to automate buying-related business functions.

The idea of automating buying-related business functions is not new. Most agencies have used automated systems to assist with a wide variety of processes including, among other things, issuing requisitions, obtaining funding and approvals, generating contract documents, tracking delivery, preparing receiving reports, and reconciling final payment for contract close-out. Traditionally, agencies relied upon a number of “stove-piped” systems to accomplish these functions. Systems had limited ability to integrate between functions. Today, significant advances in capabilities of commercial software make it possible for contract writing systems to integrate a broad spectrum of cross-functional needs. As a result, when fully operational, these systems promise to provide managers in all phases of the buying and paying process with better information to help them carry out their responsibilities more efficiently.

Contract Writing Systems

Contract writing system functionally includes electronic assistance in:

- *Development and issuance of requisitions by the program office/requiring activity to the buying office;*
- *Determination of funds are available for a contract;*
- *Preparation of synopses for direct transmission to CBDNet (or its successor);*
- *Development and issuance of solicitations as well as electronic receipt of responses;*
- *Preparation and issuance of award documentation; and*
- *Preparation of receiving reports for transmission to and review by paying*

A. Implementing Automated Acquisition/Contract Writing Systems

Accomplishment: Agencies are starting to turn to integrated electronic acquisition systems to reduce and eventually eliminate inefficient and administratively burdensome paper processes.

Functionally integrated electronic acquisition systems are beginning to help some agencies cope with greater demands falling on a smaller workforce operating under tighter budgets. For example, in FY 1998, DOE began implementation of EC Web to service the broad spectrum of their acquisition processes. This web-based system, for simplified acquisitions, is enabling DOE to automate generation, processing, and routing of requisitions for approval, interface with its financial system for reservation and obligation of funds, prepare solicitations, and receive responses. This linkage allows for the elimination of paper while providing a complete record of all elements of the transaction -- from initiation of the requisition to receipt of acknowledgment of the order from the vendor. Also of note, one DOE site is developing an interactive automated procurement system which, among other things, will automatically collect and generate contract statistics simultaneously with the occurrence of each event in the acquisition process.

Using commercial-off-the-shelf software, in FY 1998, the Department of the Interior continued its roll-out of a commercial off-the-shelf, windows-base automation/contract writing system. The Interior Department Electronic Acquisition System (IDEAS) currently enables major field sites at DOI to: (a) automate the processing of requisitioning, document generation (both for simplified acquisitions and larger dollar contracts), (b) interface with financial systems, and (c) report statistical information to the Federal Procurement Data System (FPDS). DOI expects to have IDEAS fully implemented at all of its major buying offices by the end of FY 1999.

Next Step: Share promising achievements and plans related to implementation of contract writing systems.

Contract writing systems and the functionality they provide are an integral part of agency EC buying and paying efforts. Implementation of DoD's contract writing system, for example, continues to play an important role in the Department's overall effort to become paper-free in the next millennium.

Initiatives to date suggest that thorough and early coordination across procurement, financial, information technology, and program offices throughout the agency is critical to the successful implementation of a fully integrated contract writing system. For this reason, as agencies share accomplishments and plans for future implementation, they will be asked to focus their attention on approaches for successfully securing the participation and buy-in of all affected stakeholders.

Federal System Interfaces

Seamlessly interface Federal and commercial information systems to facilitate end-to-end electronic commerce in the government.

System interfaces are those points where information systems electronically link to share data, thereby eliminating any need for manual intervention, crosswalks, or re-entry of data. Interfaces are necessary to integrate Federal systems and allow automated processing end-to-end. Since individual stages of a transaction typically involve separate systems, these systems must be interfaced to make the process seamless to the user. In particular, interfaces are required (1) between Federal financial systems and payment utilities, and (2) between the various Federal financial systems. Where possible, these interfaces should rely on commercially available software and services.

The major processes that must be linked include the following: (1) buying (notices/solicitations, offering, and awarding); (2) paying (invoicing, third party payment services, and electronic funds transfer); and (3) combined processes, in which buying and paying are effected by the same mechanism, most notably in the use of purchase cards. These major processes and the systems that support them must be interfaced with the various applications agencies use to support transaction processing, financial accountability, and performance measurement. In the government-wide EC strategic plan, the Administration committed to beginning the process of developing the detailed requirements for these interfaces. That effort has begun.

A. Developing Interface Standards Between Payment Utilities and Agencies' Legacy Systems

Accomplishment: The government has established initial guidance for interfacing information from the purchase, travel, and fleet cards to agencies' financial systems.

The rapidly growing use of credit cards for purchasing in the government has changed the face of Federal procurement and introduced a new set of challenges for the government's financial managers. In particular, the reconciliation and proper budgetary control and allocation of ever-growing numbers of card statements covering a multitude of transactions with a variety of vendors is especially challenging. Systems developed to effect this control must be well-conceived in order not to create an unnecessarily cumbersome administrative onus that could undermine the benefits cards provide. Critical to this effort is the production of interface standards to allow the card information to be integrated into agencies' financial management systems.

In November 1998, the Financial Implementation Team for Electronic Commerce (FITEC) of the CFO Council produced draft guidance on the requirements for card management systems, also known as electronic access systems (EAS). These systems provide the mechanism for the card-issuing banks to provide information to the agencies, facilitate reporting and allow account maintenance, such as changes to names, addresses, and accounting codes. Included in FITEC's document are functional requirements for the EAS to interface with agencies' financial

management systems. The purchase cards are a primary element in the Administration's electronic commerce strategy, so the interface of card activity to agencies' financial systems is of critical importance.

FITEC's document specifies the data elements and the processing required to allow information to pass from the electronic access systems to the agencies' financial systems and from the agencies' systems into the EAS. This interface is the critical first step in ensuring that the convenience and efficiency of card transactions are supported by sound financial management and reporting.

Next Step: Further develop system interface requirements.

The card management system requirements developed by FITEC are posted at <http://www.gsa.gov/fitec>. Over the coming months, these requirements will be reviewed by the Federal community, including entities such as the Joint Financial Management Improvement Program (JFMIP), which works to develop requirements on a government-wide basis. Moreover, these requirements will serve as the basis for work with the SmartPay vendor banks to ensure that their systems function properly, including interfacing with agencies' legacy systems as required.

3. MIGRATION PATH

The table set forth below describes the status and next steps currently anticipated to occur through the second quarter of FY 2000 for key government-wide projects that agencies are pursuing to implement building blocks identified in the strategic plan. The table is designed to update and indicate progress on the migration path activities identified in the plan.

Track	Building Block	Project	Status	Next Steps
Partnerships	Change Mgmt	Improve Inter-agency Mgmt Structures	<ul style="list-style-type: none"> ✓ Procurement Executives created PEC EC Committee to bring better focus to activities of stakeholders in procurement community & help identify & implement EC applications that enable reengineering of acquisition functions. ✓ Agencies reported to OMB on participation in, and effectiveness of, inter-agency groups. 	<ul style="list-style-type: none"> • EPIC, with input from PEC, CFO Council, and CIO Council will review effectiveness and inter-relationship of existing bodies & develop plan for reshaping, eliminating or creating bodies, as necessary. • PEC will host a forum for agencies and their vendors to share successful EC applications.
Partnerships	Change Mgmt	Strengthen Internal Management Structures	<ul style="list-style-type: none"> ✓ Agencies developed cross-functional plans to implement government-wide EC strategic plan in accordance with guidance issued by OMB. ✓ FAR rule issued to enable individual agencies to make more efficient use of EC applications. 	<ul style="list-style-type: none"> • Through PEC and with assistance from ECPO, agencies will share plans and discuss strategies for strengthening plans and improving reporting to OMB. PEC (in coordination with the CFO Council) will develop metrics to help managers keep efforts on track and OMB to assess agency progress. • PEC will work towards long-term plan to improve current data collection methodologies.

Track	Building Block	Project	Status	Next Steps
Partnerships	Change Mgmt	Undertake Outreach	<ul style="list-style-type: none"> ✓ OFPP and SBA initiated a pilot to facilitate faster and easier access to competitive small businesses through PRONet. 	<ul style="list-style-type: none"> • GSA will improve the utility and user-friendliness of the ARNet to enable easy access to key information and easier interactions between buyers and sellers. • OFPP Administrator, in consultation with PEC, will designate a single government-wide point of entry to ensure vendors have easy and convenient access to government business opportunities.
High Volume Activity	Electronic Catalogs	Improve Access to and Use of Catalogs	<ul style="list-style-type: none"> ✓ DoD is expanding its E-mall to provide customers with one-stop visibility into all DoD catalogs. ✓ To further enable electronic ordering and payment, GSA requires all schedule contractors (as of Jan. 1999) to accept purchase card for micro-purchases on <i>GSA Advantage!</i> ✓ Pilot efforts have demonstrated ability to improve market research across catalogs. 	<ul style="list-style-type: none"> • IAIC, in consultation with PEC and the Program Managers Council, will create a central index to further ease the identification of electronic catalogs suitable for interagency use. • With management assistance from ECPO and in consultation with EPIC, select agencies will conduct pilot to demonstrate real time ordering and payment with authentication and security among interoperable catalogs. (See entry under Secure Catalog Transactions).

Track	Building Block	Project	Status	Next Steps
High Volume Activity	Electronic Payments	Increase Use of Purchase Cards	✓ Through GSA's SmartPay contract, agencies are increasing use of purchase cards to facilitate small dollar purchasing and begin taking advantage of value added services.	<ul style="list-style-type: none"> GSA, with support from EPIC, CFO Council, and PEC, will work with agencies to address transitional issues and ensure smooth transition to new card providers so agencies are effectively positioned to take advantage of integrated and multi-functional smart cards as processes are reengineered.
High Volume Activity	Electronic Payments	Improve Intra-Govmntl Transfers	✓ FMS and other agencies extensively examined options for improving intra-governmental transfers. EPIC has decided as a first step to optimize the use of the commercial card system for these transactions.	<ul style="list-style-type: none"> A small negotiating team, with guidance from EPIC, will work with SmartPay contractors to secure more advantageous processing rates for intra-governmental transfers.
High Volume Activity	Electronic Payments	Improve payments made through means other than purchase cards.	<ul style="list-style-type: none"> ✓ VA's Prime Vendor program provides commercial payment processing in large value, ongoing business relationships. ✓ Treasury is developing innovative electronic payment mechanisms to reduce agencies' needs for paper checks. When checks are used as a last resort under a waiver from Treasury, agencies are using commercially-provided third-party drafts with electronic "back ends." 	<ul style="list-style-type: none"> VA will continue to expand its Prime Vendor payment mechanism to other facilities. Other agencies will study the use of similar mechanisms. Treasury will continue to develop and publicize innovative electronic payment mechanisms. Agencies will continue to reduce their reliance on paper checks, but when they are necessary, agencies will give preference to mechanisms that leverage existing banking relationships and provide the opportunity for electronic data interfaces.

Track	Building Block	Project	Status	Next Steps
High Volume Activity	ID & Authentication	PKI and Certification Authorities	<ul style="list-style-type: none"> ✓ The PKI Steering Committee has conducted a number of pilot studies to develop the concept of using a Public Key Infrastructure in the Federal government. ✓ GSA has issued an RFP and received proposals to award contracts to Certification Authorities, a critical element in a PKI. 	<ul style="list-style-type: none"> • GSA will review the proposals and make awards for Certificate Authorities. • The PKI Steering Committee will continue to coordinate PKI efforts in the government.
High Volume Activity	ID & Authentication	Secure Catalog Transactions	<ul style="list-style-type: none"> ✓ Working with industry, the government has begun to develop a means for authenticating buyers on electronic catalogs. 	<ul style="list-style-type: none"> • With management assistance from ECPO and in consultation with EPIC, select agencies will continue to prove further functionality in this area and seek to apply authentication techniques to both buyers and sellers to enable catalog ordering and payment.
High Volume Activity	ID & Authentication	Manage Seller Information	<ul style="list-style-type: none"> ✓ DoD has created a central contractor registration database to reduce burden associated with the collection of seller information. 	<ul style="list-style-type: none"> • Under EPIC's leadership, an assessment will be conducted of current agency practices. • EPIC will work with DoD and other agencies to consider pilots to inform this evaluation.

Track	Building Block	Project	Status	Next Steps
Re-engineer key functions	Contract Formation & Admin.	Improve Access to Business Opportunities	✓ Agencies are piloting an electronic posting system (EPS) to determine whether notices, solicitations, and related information can be easily accessed from a single, government-wide point of entry.	<ul style="list-style-type: none"> • PEC, with assistance of EPS users group, will evaluate feasibility of EPS serving as the government-wide single point of entry to procurement information. • EPS users group, in consultation with PEC, will hold industry forum to solicit concerns regarding single point of entry options. • Administration is seeking legislation to ensure statutory framework permits agencies to take maximum advantage of efficiency offered by EC in improving access to business opportunities.
Re-engineer key functions	Federal System Interfaces	Develop Interface Standards	✓ FITEC published an initial study describing functional requirements and data elements for system interfaces with card management systems.	<ul style="list-style-type: none"> • FITEC, GSA, and others participating in the SmartPay implementation will continue to clarify the requirements for card management system function, including system interfaces.

APPENDIX A: OMB GUIDANCE FOR DEVELOPING EC REPORTS

November 25, 1998

M-99-02

MEMORANDUM FOR HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

FROM: Jacob J. Lew (signed)
Director

SUBJECT: Agency Electronic Commerce Reports on Federal Purchasing and Payment

This memorandum requests that Executive departments and selected agencies submit a two-part report to the Office of Management and Budget (OMB) identifying (1) the activities they have undertaken in FY 1998 to use electronic commerce (EC) in their purchasing and payment processes and (2) the actions they are undertaking or plan to take during FY 1999 and FY 2000 to implement the Federal government's strategic plan for EC purchasing and payment. The government-wide strategic plan, *Electronic Commerce for Buyers and Sellers*, was issued last March by the President's Management Council's Electronic Processes Initiatives Committee (EPIC). Agency EC reports will form the basis of OMB's upcoming report to Congress on EC activity, which is due by March 1, 1999.

An agency EC report should be prepared by each of the departments and agencies identified in Attachment A.

EC Activities in FY 1998

Under the Office of Federal Procurement Policy Act (OFPP Act) and the Clinger-Cohen Act, OMB oversees Federal agencies' implementation of EC in their acquisition activities. Among other things, section 30 of the OFPP Act requires the OFPP Administrator to submit to Congress, by March 1 of each year, a report on the implementation of EC by Federal agencies (see Attachment B). Accordingly, OMB requests that agencies describe their EC activities in FY 1998. Instructions for reporting on these activities are contained in Attachment C. This discussion should constitute the first part of the agency's EC report.

Implementation of the Federal Government's Strategic Planning for EC Activities

Section 30 of the OFPP Act also calls for the development of a "strategic plan for the implementation of a government-wide electronic commerce capability." The Federal government's strategic plan for EC was submitted to Congress last March by EPIC. The strategic plan outlines how the Federal government can take advantage of EC to improve buying and paying processes. The strategic plan describes the actions, or "building block" activities, that Federal agencies need to undertake in order for the Federal government to turn the potential of EC into a reality.

OMB requests that agencies discuss how they are and will be implementing the activities called for in the strategic plan. Many agencies are developing strategies to address the application of EC technologies to business functions beyond those specifically related to purchasing and payment functions. These agencies may also discuss, at their discretion, EC efforts beyond purchasing and payment, provided the materials called for by this memorandum are clearly identified and addressed.

Instructions for preparing implementation plans are provided in Attachment D. This discussion should constitute the second part of the agency's EC report.

Submissions:

Agencies should submit their EC reports to OFPP by February 15, 1999. To facilitate cross functional-coordination, OFPP will provide copies of agency reports to the appropriate Resource Management Office at OMB as well as to the Office of Federal Financial Management and the Office of Information and Regulatory Affairs.

Information Contacts:

Questions regarding this guidance should be directed to OFPP (Julie Basile, 202-395-4821, or Mathew Blum, 202-395-4953).

Attachments

Agencies Subject to OMB Memorandum 99-02

The following is a list of agencies to which OMB Memorandum 99-02 is applicable:

- The Department of Agriculture
- The Department of Commerce
- The Department of Defense
- The Department of Education
- The Department of Energy
- The Department of Health and Human Services
- The Department of Housing and Urban Development
- The Department of the Interior
- The Department of Justice
- The Department of Labor
- The Department of State
- The Department of Transportation
- The Department of the Treasury
- The Department of Veterans Affairs
- The Agency for International Development
- The Environmental Protection Agency
- The Federal Emergency Management Agency
- The General Services Administration
- The National Aeronautics and Space Administration
- The Nuclear Regulatory Commission
- The Office of Personnel Management
- The Small Business Administration
- The Social Security Administration

SECTION 30 OF THE OFFICE OF FEDERAL PROCUREMENT
POLICY ACT, AS AMENDED (41 U.S.C. 426)

“SEC. 30. USE OF ELECTRONIC COMMERCE IN FEDERAL PROCUREMENT.

“(a) IN GENERAL.—The head of each executive agency, after consulting with the Administrator, shall establish, maintain, and use, to the maximum extent that is practicable and cost-effective, procedures and processes that employ electronic commerce in the conduct and administration of its procurement system.

“(b) APPLICABLE STANDARDS.—In conducting electronic commerce, the head of an agency shall apply nationally and internationally recognized standards that broaden interoperability and ease the electronic interchange of information.

“(c) AGENCY PROCEDURES.—The head of each executive agency shall ensure that systems, technologies, procedures, and processes established pursuant to this section—

“(1) are implemented with uniformity throughout the agency, to the extent practicable;

“(2) are implemented only after granting due consideration to the use or partial use, as appropriate, of existing electronic commerce and electronic data interchange systems and infrastructures such as the Federal acquisition computer network architecture known as FACNET;

“(3) facilitate access to Federal government procurement opportunities, including opportunities for small business concerns, socially and economically disadvantaged small business concerns, and business concerns owned predominantly by women; and

“(4) ensure that any notice of agency requirements or agency solicitation for contract opportunities is provided in a form that allows convenient and universal user access through a single, government-wide point of entry.

“(d) IMPLEMENTATION.—The Administrator shall, in carrying out the requirements of this section—

“(1) issue policies to promote, to the maximum extent practicable, uniform implementation of this section by executive agencies, with due regard for differences in program requirements among agencies that may require departures from uniform procedures and processes in appropriate cases, when warranted because of the agency mission;

“(2) ensure that the head of each executive agency complies with the requirements of subsection (c) with respect to the agency systems, technologies, procedures, and processes established pursuant to this section; and

“(3) consult with the heads of appropriate Federal agencies with applicable technical and functional expertise, including the Office of Information and Regulatory Affairs, the National Institute of Standards and Technology, the General Services Administration, and the Department of Defense.

“(e) REPORT.—Not later than March 1, 1998, and every year afterward through 2003, the Administrator shall submit to Congress a report setting forth in detail the progress made in implementing the requirements of this section. The report shall include the following:

“(1) A strategic plan for the implementation of a Government-wide electronic commerce capability.

“(2) An agency-by-agency summary of implementation of the requirements of subsection (c), including timetables, as appropriate, addressing when individual agencies will come into full compliance.

“(3) A specific assessment of compliance with the requirement in subsection (c) to provide universal public access through a single, Government-wide point of entry.

“(4) Beginning with the report submitted on March 1, 1999, an agency-by-agency summary of the volume and dollar value of transactions that were conducted using electronic commerce methods during the previous calendar year.

“(5) A discussion of possible incremental changes to the electronic commerce capability referred to in subsection (c)(4) to increase the level of government contract information available to the private sector, including an assessment of the advisability of including contract award information in the electronic commerce functional standard.

“(f) ELECTRONIC COMMERCE DEFINED.—For the purposes of this section, the term ‘electronic commerce’ means electronic techniques for accomplishing business transactions, including electronic mail or messaging, World Wide Web technology, electronic bulletin boards, purchase cards, electronic funds transfers, and electronic data interchange.’”

Instructions for Reporting on FY 1998 EC Activities
for Purchasing and Payment

By February 15, 1999, agencies shall provide to OMB a description of activities undertaken in FY 1998 to use EC to improve purchasing and paying functions.

a. *Efforts related to government-wide building blocks.* Assessments should include highlights of those activities that were undertaken in support of government-wide building blocks identified in the government-wide strategic plan, *Electronic Commerce for Buyers and Sellers*. Related activities in FY 1998 that preceded the issuance of the strategic plan should also be described. A copy of the strategic plan is available at <http://policyworks.gov/epic>. The activities identified in the strategic plan include:

1. expanding and enhancing electronic catalog purchasing, by increasing interoperability as feasible, linking to payment utilities, and migrating to commercial catalog solutions;
2. increasing and improving use of electronic payment utilities through purchase card implementation for account management, invoice and remittance processing, and intra-governmental transfers;
3. migrating to standard commercial services for electronic identification and authentication of buyers and sellers (including the use of commercial risk structures) as well as for management of information about sellers, as appropriate;
4. making contract formation and administration easier and more effective for buyers and sellers (including small businesses), through use, among other things, of electronic market research tools, and participation in pilot efforts to enable sellers to gain electronic access to government business opportunities through a single, government-wide point of entry;
5. using contract writing systems, where appropriate, to automate buying related business functions;
6. using standard interfaces between agency systems and commercial systems, including for accounting and reporting, and increasing access to EC performance information; and
7. fostering government and commercial EC partnerships.

b. *Additional efforts.* Agencies should describe efforts they are undertaking in furtherance of section 30(c) of the OFPP Act, 41 U.S.C. 426(c), to the extent such efforts are not otherwise discussed in the response to paragraph (a), above. In addition, agencies should provide data that they have collected which would support the requirements of section 30(e)(4) of the OFPP Act, 41 U.S.C. 426(e)(4) and discuss obstacles they are encountering in the collection of such information.

c. *Participation in interagency groups.* Agencies are asked to identify the interagency EC groups on which they participated in FY 1998. They should discuss how this participation helped to further EC implementation in their agency and how, if at all, the operation and structure of these groups can be improved.

d. *Vendor data collection.* Agencies are requested to provide information regarding vendor data collection and management processes in order to assist further interagency consideration of means for improving those processes. Agencies should identify: (1) the vendor data they are collecting as part of their purchasing and payment processes, (2) how they are collecting it (e.g., through registries such as Central Contractor Registration (CCR), the Procurement Marketing and Access Network (PRONet), through an agency system, through a financial intermediary, on a transaction-by-transaction basis, using a combination of processes, etc.), and (3) how they are using this data. Agencies should further discuss how any databases used to collect this information integrate within the agency as well as with Federal databases, such as the Federal Procurement Data System, or prompt pay databases at the agency or the Department of Treasury.

Attachment D
OMB Memorandum 99-02

Instructions for Preparing Agency EC Implementation Plans

By February 15, 1999, agencies shall identify how they are and will be implementing the government-wide strategic plan, *Electronic Commerce for Buyers and Sellers*. In developing plans, agencies should work collaboratively across procurement, financial (including budget), information technology, and program functions. Plans should be consistent with agency budget submissions (OMB Circular A-11, Exhibits 42 and 300B), agency five-year financial management plans, agency information technology planning under the Clinger-Cohen Act, and strategic plans and performance plans submitted under the Government Performance and Results Act (GPRA).

The government-wide strategic plan states that, by the year 2001, all Federal agencies will support their programs by making available customer friendly electronic purchasing tools integrated with end-to-end commercial electronic processing of payment, accounting and performance reporting information. Agencies should describe how this vision will be carried out in the context of the mission-specific needs of the agency's procurement, financial, information technology and program functions.

Accordingly, implementation plans, at a minimum, shall (1) identify the major initiatives that are being undertaken in FY 1999 and will be undertaken in FY 2000 to implement the building block activities discussed in the strategic plan (see Attachment C for a brief description of these activities), (2) establish estimated completion dates for major initiatives, and (3) identify the management structures and/or processes to be employed.

1. *Major initiatives.* Agencies shall describe all major EC initiatives planned or ongoing in the agency during FY 1999 and FY 2000 related to purchasing and payment functions. In addition to describing each major initiative, agencies shall, at a minimum, provide the following information:
 - (a) Indicate how the initiative supports government-wide policy principles.
 - (b) Describe how the initiative supports building blocks identified in section 6 of the strategic plan. If any planned or ongoing major initiatives fall outside the building block activities in the strategic plan, agencies shall demonstrate that these initiatives support the government-wide policy principles and comply with capital planning guidelines and requirements.
 - (c) If the initiative is material to the agency's financial operations, agencies should describe the financial management impact of the initiative and reference where the initiative is

included in the agency's five-year financial management plans and/or agency's budget submission -- Exhibit 42 and 300B under OMB Circular A-11.

(d) If the initiative includes a major acquisition, agencies should reference where the initiative is included in the agency's budget submission -- Exhibit 42 and 300B under OMB Circular A-11.

(e) If any major initiative falls outside the building blocks in the strategic plan, is not significant to the financial management of the agency, is not a major acquisition, but is deemed by the agency head to be a major initiative, agencies should describe how the initiative supports the agency's mission.

2. *Milestones and measures.* At a minimum, agencies shall identify the anticipated completion dates (by fiscal quarter) for all major initiatives (or portions thereof) that will be completed in FY 1999 and FY 2000 and how they anticipate gauging the effectiveness of major initiatives.

3. *Management structures and processes.* Agency EC planning, investment, implementation and integration should be coordinated across agency components and functional areas.

(a) Implementation plans shall describe the management structures and/or processes being used to integrate and/or coordinate EC planning, investment, implementation, and evaluation across procurement, financial, information technology and program offices throughout the agency.

(b) Implementation plans shall identify the interagency EC groups in which the agency participates, the agency initiatives that are supported through participation in each group, and the steps taken to ensure representation is cross-functional and consistent with the coordinated internal agency management structures and processes described in paragraph 3(a).

(c) Implementation plans should identify steps being taken to achieve uniform implementation throughout the agency to the extent practicable and to consider the use or partial use, as appropriate, of existing EC and electronic data interchange systems and infrastructures.

(d) Implementation plans shall identify the individual ultimately responsible for coordination of all EC initiatives across the agency.

APPENDIX B: EC ACTIVITY AGENCY-BY-AGENCY

	CHANGE MANAGEMENT								Catalog / Purchase Cards	Security	Contract Formation			
	EC Impl. Plan	InterAgency Group Participation						Using PRO-Net	Generally using purchase card to pay for catalog orders	Developed/operate catalogs/emails	Participated in CommerceNet	EPS		Contract Writing System
		EPIC	CFO EC /FITEC	PEC EC Comm	IAIC	PKI Strg Comm.	EC Coord's					Notices	Posting Solicitations	
AID	*								*			*	*	*
Agriculture	*					*			*					*
Commerce	*					*			*			*	*	*
DoD	*	*	*	*	*	*	*		*	*	*	*	*	*
Education	*	*	*	*	*		*	*	*					*
Energy	*					*			*					
HHS	*		*	*	*				*	*		*	*	*
HUD	*							*	*					*
Interior	*	*	*	*	*	*	*	*	*		*			*
Justice	*					*	*		*	*				*
Labor	*								*					
State	*		*	*	*		*	*	*					*
Transportation	*			*	*	*	*	*	*			*	*	*
Treasury	*	*	*		*	*	*	*	*			*	*	
Veterans Affairs	*	*	*	*	*		*		*					*
EPA	*	*		*	*	*	*	*	*					*
FEMA	*							*	*					
GSA	*	*	*		*	*	*	*	*	*	*	*	*	*
NASA	*			*	*	*	*		*	*	*	*	*	
NRC	*			*	*		*	*	*					*
OPM	*				*		*	*	*					*
SBA	*					*			*					
SSA	*					*			*					

APPENDIX C: SELECTED TRANSACTIONAL DATA

Table 1: Purchase Card Activity for CY 98

Agency	Purchase Card	
	# of Card Transactions	Total Dollars on Purchase Card
AID	4,731	\$1,844,565
Agriculture	749,071	\$245,833,632
Air Force	2,132,919	\$815,193,902
Army	3,289,117	\$1,469,935,473
Commerce	267,249	\$100,577,009
Other Defense	368,880	\$249,910,240
EPA	74,398	\$31,173,793
Education	15,167	\$8,350,545
Energy	314,759	\$165,704,195
FEMA	25,137	\$21,395,422
GSA	203,454	\$120,932,148
HHS	419,867	\$190,201,839
HUD	16,278	\$11,240,529
Interior	865,200	\$291,741,290
Justice	600,093	\$274,400,016
Labor	43,462	\$13,661,320
NASA	122,462	\$68,161,886
Navy	2,090,131	\$1,121,535,486
NRC	4,607	\$2,299,269
OPM	13,444	\$9,091,112
SSA	98,771	\$49,083,317
SBA	19,034	\$8,184,331
State	36,172	\$20,467,403
Transportation	618,684	\$265,845,549
Treasury	463,120	\$141,346,055
VA (Purchase Card)	1,911,419	\$1,073,886,922
VA (Prime Vendor)	251,271	\$981,455,103
Other Agencies	1,234,462	\$453,148,876
TOTALS	16,253,359	\$8,206,601,227

Source: Federal Supply Service based on information furnished by the International Merchant Purchase Authorization Card (IMPAC) and GSA SmartPay contractors.

Table 2: Business Opportunities Posted via CBDNet for FY 98

Posting Opportunities on CBDNet	
Agency	Number of Notices Posted in FY 98
AID	324
Agriculture	3,878
Air Force	16,570
Army	14,349
Commerce	1,375
DLA	1,430
Other Defense (including Navy)	53,420
EPA	749
Education	151
Energy	698
FEMA	160
GSA	3,928
HHS	3,015
HUD	449
Interior	3,366
Justice	2,817
Labor	453
NASA	2,092
NRC	90
OPM	28
SBA	56
State	222
Transportation	2,865
Treasury	1,306
VA	5,319
Other Agencies	8,855
TOTALS	127,965

Source: Department of Commerce

Table 3: FACNET Transactions for CY 98

Agency	FACNET TRANSACTIONS				
	Public RFQs	IFBs & RFPs	Responses Received	FACNET POs & DOs	FACNET POs & DOs \$Amt
AID	-	-	-	-	\$0
Agriculture	-	-	-	-	\$0
Air Force	7,550	-	39,876	2,920	\$31,555,577
Army	18,887	-	79,217	8,903	\$185,558,816
Commerce	123	-	1,169	23	\$169,000
DLA	-	-	-	-	\$0
Other Defense	729	-	954	1,576	\$7,176,286
EPA	501	-	2,346	31	\$182,535
Education	-	-	-	-	\$0
Energy	-	-	-	-	\$0
FEMA	-	-	-	-	\$0
GSA	-	237	13	61,020	\$745,298,409
HHS	648	76	870	76	\$286,741
HUD	-	-	-	-	\$0
Interior	4,574	-	2,108	127	\$1,530,602
Justice	-	-	-	-	\$0
Labor	-	-	-	-	\$0
NASA	-	-	-	-	\$0
Navy	7,367	2,385	11,561	4,121	\$58,914,605
OPM	67	-	60	185	\$2,774,965
SBA	13	-	-	-	\$332,353
State	-	-	-	2,057	\$192,537,368
Transportation	-	-	-	-	\$0
Treasury	43	-	291	8	\$279,450
VA	-	-	-	-	\$0
TOTALS	40,502	2,698	138,465	81,047	1,226,596,707

APPENDIX D: LEGISLATIVE PROPOSAL

In May 1999, the Administration transmitted to Congress a legislative proposal to recognize that the requirement for notices of solicitation to be published by the Secretary of Commerce in hard copy in the *Commerce Business Daily* may be alternatively satisfied through the provision of widespread electronic public notice in a form that allows convenient and universal user access through a single Government-wide point of entry. The proposal also would permit solicitations to be issued 10 days after an electronic notice is published through the single Government-wide point of entry (as opposed to waiting 15 days as is presently required unless an exception applies). If the solicitation were also published through the single Government-wide point of entry, either with the notice or subsequent thereto, the wait period would be waived and the time period for submitting bids or proposals would begin to run from the point at which such documents were issued electronically.

The proposal (which was submitted for incorporation into the Defense Authorization Act for FY 2000 as a government-wide provision) is set forth below:

SEC. ____ . ELECTRONIC ACCESS TO BUSINESS OPPORTUNITIES.

(a) SMALL BUSINESS ACT. -- Section 8 of the Small Business Act (15 U.S.C. 637(e)) is amended --

(1) in subsection (e) by adding at the end the following new paragraph:

“(4) Whenever a notice is required by paragraph (1)(A) and such notice is published through the single Government-wide point of entry (designated in the Federal Acquisition Regulation) as provided for in subsection (h) of this section, the wait period set forth in paragraph (3)(A) shall be reduced by 5 days. The wait period set forth in paragraph (3)(A) shall not apply if the solicitation is issued electronically and is accessible through the single Government-wide point of entry as provided for in subsection (h), either simultaneously with or subsequent to issuance of the notice, and the period specified in paragraph (3)(B) for submission of bids or proposals shall begin to run from the date the solicitation is so published.”

(2) by redesignating subsections (h), (i), (j), and (k) as subsections (i), (j), (k), and (l), respectively; and

(3) by inserting the following new subsection (h):

“(h) Providing widespread electronic public notice of the solicitation in a form that allows convenient and universal user access through the single Government-wide point of entry (designated in the Federal Acquisition Regulation) will satisfy the publication requirements of this section.”.

(b) OFFICE OF FEDERAL PROCUREMENT POLICY ACT. -- Section 18 of the Office of Federal Procurement Policy Act (41 U.S.C. 416) is amended --

(1) in subsection (a) --

(A) by redesignating paragraphs (4), (5), and (6) as paragraphs (5), (6), and (7), respectively; and

(B) by adding the following new paragraph (4):

“(4) Whenever a notice is required by paragraph (1)(A) and such notice is published through the single Government-wide point of entry (designated in the Federal Acquisition Regulation) as provided for in subsection (e) of this section, the wait period set forth in paragraph (3)(A) shall be reduced by 5 days. The wait period set forth in paragraph (3)(A) shall not apply if the solicitation is issued electronically and is accessible through the single Government-wide point of entry as provided for in subsection (e), either simultaneously with or subsequent to issuance of the notice, and the period specified in paragraph (3)(B) for submission of bids or proposals shall begin to run from the date the solicitation is so published.”; and

(2) by adding at the end the following new subsection:

“(e) Providing widespread electronic public notice of the solicitation in a form that allows convenient and universal user access through the single Government-wide point of entry (designated in the Federal Acquisition Regulation) will satisfy the publication requirements of this section.”.

(c) **IMPLEMENTATION.** – This section shall not apply to the extent the President determines it is inconsistent with any international agreement to which the United States is a party.

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